1856

SILVER AND GOLD

TABLES,

PREPARED FOR

JUSTINIAN CAIRE,

IMPORTER AND DEALER IN

Assayers' Materials,

CHEMISTS' GLASSWARE,

BRASS WIRE SCREEN, HARDWARE,

FANCY GOODS, Etc., Etc.

530 & 532 WASHINGTON STREET,

Between Montgomery, **San Francisco.**

H. CHANLAU & Co., General Printers
Clay Street, below Montgomery
SAN FRANCISCO

AGENCY FOR

L. OERTLING,

LONDON,

CHEMICAL AND ASSAY BALANCES.

A FULL ASSORTMENT ALWAYS ON HAND.

AGENCY FOR

BECKER & SONS'

ASSAY AND BULLION SCALES.

TROEMNER BULLION SCALES, EVERY SIZE,

ALWAYS ON HAND.

TABLES

SHOWING THE

VALUE OF SILVER AND GOLD,

PER OUNCE TROY.

AT DIFFERENT DEGREES OF FINENESS,

PREPARED FOR

JUSTINIAN CAIRE,

IMPORTER OF

ASSAYERS' MATERIALS,

Nos. 530 & 532 WASHINGTON STREET,

San Francisco.

Removed to
521 & 523 Market Street.

PROPERTIES OF SILVER.

Silver has been known from the earliest ages, coin of that metal has been found dating back to 800 B. C., and in the Pyramids of Egypt linen stained black by salts of silver has been discovered.

The Alchemists called it Luna or Diana, and we still call the fused Nitrate of Silver Lunar Caustic. The Latin name for it was Argentum from which we derive the term Argentiferous and the chemical symbol Ag.

Silver is very ductile and the best conductor of heat of all the metals; its atomic weight is 108, its specific gravity varies from 10.43 to 10.56, as it may be cast, hammered, drawn, etc. It fuses at about 1832° F. (which is lower than the melting point of Gold or of Copper) and can be distilled at the heat of the Oxyhydrogen flame; in melting, it absorbs Oxygen from the air, which it gives off again on cooling, causing the molten mass to spurt when suddenly cooled. (Only pure silver acts thus).

Pure Silver may be obtained crystallized in Cubes and Octahedrons. It dissolves in Nitric Acid of medium concentration; concentrated Sulphuric Acid changes it into Sulphate of Silver at a boiling heat, while Muriatic Acid does not act upon it. Quicksilver unites with it, forming an Amalgam, and it is easily alloyed with many other metals by fusion.

The characteristic test for Silver in (acid) Solution is made by adding Muriatic Acid or a soluble Chloride, when a white, curdy precipitate of Chloride of Silver is formed, insoluble in water or in acids, but soluble in Ammonia (also in Cyanide of Potassium or Hyposulphite of Soda); from the ammoniacal solution acids reprecipitate the Chloride of Silver. Very dilute solutions of Silver are rendered opalescent by applying this test.

All compounds of Silver yield metallic Silver when fused with Carbonate of Soda before the blowpipe.

Caustic Soda or Potassa precipitates Silver from its solution as greyish-brown oxide of S. insoluble in an excess of the precipitant, soluble in Nitric or Sulphuric Acid.

Ammonia produces the same precipitate soluble in an excess of the precipitant and in Nitric or Sulphuric Acid.

Carbonated Alkalies produce a precipitate of yellowish-white Carbonate of Silver soluble in Carbonate of Ammonia and in Nitric or Sulphuric Acid.

Sulphureted Hydrogen and Sulphide of Ammonium produce a black precipitate of Sulphide of Silver which is decomposed by boiling Nitric Acid with elimination of Sulphur.

Copper, Zinc and other easily oxidizable metals precipitate metallic Silver as a gray, spongy powder, and some organic substances act in a similar manner.

Silver is found in its native state, alloyed with Gold, and as Sulphide of Silver, frequently with Copper Glance, Galena and other metallic Sulphides, less frequently as Chloride of Silver (Horn Silver) and rarely as Iodide or Bromide of Silver.

The water of the oceans contains Silver in small proportions.

We are indebted to Messrs. Falkenau & Reese, Assayers, for the above article. J. C.

Note to Silver Table.

The Table of the VALUE OF SILVER is calculated from the basis upon which the value of Silver is computed in the U. S. Mint and its branches, viz:

99 ounces of pure Silver is worth $128.00; or
11 ounces of standard Silver (900 fine) is worth $12.80.
Hence, 1 oz. of pure Silver is worth $1.29.29.
1 oz. standard Silver is worth $1.16.36.

Silver usually commands a Premium, which varies with the supply and demand.

CALIFORNIA STATE LIBRARY
CALIFORNIA SECTION

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

0 to 100 fine.

	FINE	DOLLARS	CENTS		FINE	DOLLARS	CENTS		FINE	DOLLARS	CENTS		FINE	DOLLARS	CENTS		FINE	DOLLARS	CENTS
00	0		00.00	20			02.59	40			05.17	60			07.76	80			10.34
	1		00.13		21		02.72		41		05.30		61		07.89		81		10.47
	2		00.26		22		02.84		42		05.43		62		08.02		82		10.60
	3		00.39		23		02.97		43		05.56		63		08.15		83		10.73
	4		00.52		24		03.10		44		05.69		64		08.27		84		10.86
	5		00.65		25		03.23		45		05.82		65		08.40		85		10.99
	6		00.78		26		03.36		46		05.95		66		08.53		86		11.12
	7		00.90		27		03.49		47		06.08		67		08.66		87		11.25
	8		01.03		28		03.62		48		06.21		68		08.79		88		11.38
	9		01.16		29		03.75		49		06.34		69		08.92		89		11.51
10			01.29	30			03.88	50			06.46	70			09,05	90			11.64
	11		01.42		31		04.01		51		06.59		71		09.18		91		11.77
	12		01.55		32		04.14		52		06.72		72		09.31		92		11.89
	13		01.68		33		04.27		53		06.85		73		09.44		93		12.02
	14		01.81		34		04.40		54		06.98		74		09.57		94		12.15
	15		01.94		35		04.53		55		07.11		75		09.70		95		12.28
	16		02.07		36		04.65		56		07.24		76		09.83		96		12.41
	17		02.20		37		04.78		57		07.37		77		09.96		97		12.54
	18		02.33		38		04.91		58		07.50		78		10.08		98		12.67
	19		02.46		39		05.04		59		07.63		79		10.21		99		12.80

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.
530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

100 to 200 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE.	DOLLARS	CENTS	FINE	DOLLARS	CENTS
100		12.93	**120**		15.52	**140**		18.10	**160**		20.69	**180**		23.27
101		13.06	121		15.64	141		18.23	161		20.82	181		23.40
102		13.19	122		15.77	142		18.36	162		20.95	182		23.53
103		13.32	123		15.90	143		18.49	163		21.07	183		23.66
104		13.45	124		16.03	144		18.62	164		21.20	184		23.79
105		13.58	125		16.16	145		18.75	165		21.33	185		23.92
106		13.70	126		16.29	146		18.88	166		21.46	186		24.05
107		13.83	127		16.42	147		19.01	167		21.59	187		24.18
108		13.96	128		16.55	148		19.14	168		21.72	188		24.31
109		14.09	129		16.68	149		19.26	169		21.85	189		24.44
110		14.22	**130**		16.81	**150**		19.39	**170**		21.98	**190**		24.57
111		14.35	131		16.94	151		19.52	171		22.11	191		24.69
112		14.48	132		17.07	152		19.65	172		22.24	192		24.82
113		14.61	133		17.20	153		19.78	173		22.37	193		24.95
114		14.74	134		17.33	154		19.91	174		22.50	194		25.08
115		14.87	135		17.45	155		20.04	175		22.63	195		25.21
116		15.00	136		17.58	156		20.17	176		22.76	196		25.34
117		15.13	137		17.71	157		20.30	177		22.88	197		25.47
118		15.26	138		17.84	158		20.43	178		23.01	198		25.60
119		15.39	139		17.97	159		20.56	179		23.14	199		25.73

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

200 to 300 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE.	DOLLARS	CENTS	FINE	DOLLARS	CENTS
200		25.86	**220**		28.44	**240**		31.03	**260**		33.62	**280**		36.20
201		25.99	221		28.57	241		31.16	261		33.75	281		36.33
202		26.12	222		28.70	242		31.29	262		33.87	282		36.46
203		26.25	223		28.83	243		31.42	263		34.00	283		36.59
204		26.38	224		28.96	244		31.55	264		34.13	284		36.72
205		26.50	225		29.09	245		31.68	265		34.26	285		36.85
206		26.63	226		29.22	246		31.81	266		34.39	286		36.98
207		26.76	227		29.35	247		31.94	267		34.52	287		37.11
208		26.89	228		29.48	248		32.06	268		34.65	288		37.24
209		27.02	229		29.61	249		32.19	269		34.78	289		37.37
210		27.15	**230**		29.74	**250**		32.32	**270**		34.91	**290**		37.49
211		27.28	231		29.87	251		32.45	271		35.04	291		37.62
212		27.41	232		30.00	252		32.58	272		35.17	292		37.75
213		27.54	233		30.13	253		32.71	273		35.30	293		37.88
214		27.67	234		30.25	254		32.84	274		35.43	294		38.01
215		27.80	235		30.38	255		32.97	275		35.56	295		38.14
216		27.93	236		30.51	256		33.10	276		35.68	296		38.27
217		28.06	237		30.64	257		33.23	277		35.81	297		38.40
218		28.19	238		30.77	258		33.36	278		35.94	298		38.53
219		28.32	239		30.90	259		33.49	279		36.07	299		38.66

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.
530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

300 to 400 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
300		38.79	**320**		41.37	**340**		43.96	**360**		46.55	**380**		49.13
301		38.92	321		41.50	341		44.09	361		46.67	381		49.26
302		39.05	322		41.63	342		44.22	362		46.80	382		49.39
303		39.18	323		41.76	343		44.35	363		46.93	383		49.52
304		39.30	324		41.89	344		44.48	364		47.06	384		49.65
305		39.43	325		42.02	345		44.61	365		47.19	385		49.78
306		39.56	326		42.15	346		44.74	366		47.32	386		49.91
307		39.69	327		42.28	347		44.86	367		47.45	387		50.04
308		39.82	328		42.41	348		44.99	368		47.58	388		50.17
309		39.95	329		42.54	349		45.12	369		47.71	389		50.29
310		40.08	**330**		42.67	**350**		45.25	**370**		47.84	**390**		50.42
311		40.21	331		42.80	351		45.38	371		47.97	391		50.55
312		40.34	332		42.93	352		45.51	372		48.10	392		50.68
313		40.47	333		43.05	353		45.64	373		48.23	393		50.81
314		40.60	334		43.18	354		45.77	374		48.36	394		50.94
315		40.73	335		43.31	355		45.90	375		48.48	395		51.07
316		40.86	336		43.44	356		46.03	376		48.61	396		51.20
317		40.98	337		43.57	357		46.16	377		48.74	397		51.33
318		41.11	338		43.70	358		46.29	378		48.87	398		51.46
319		41.24	339		43.83	359		46.42	379		49.00	399		51.59

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

400 to 500 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE.	DOLLARS	CENTS	FINE	DOLLARS	CENTS
400		51.72	**420**		54.30	**440**		56.89	**460**		59.47	**480**		62.06
401		51.85	421		54.43	441		57.02	461		59.60	481		62.19
402		51.98	422		54.56	442		57.15	462		59.73	482		62.32
403		52.11	423		54.69	443		57.28	463		59.86	483		62.45
404		52.23	424		54.82	444		57.41	464		59.99	484		62.58
405		52.36	425		54.95	445		57.54	465		60.12	485		62.71
406		52.49	426		55.08	446		57.66	466		60.25	486		62.84
407		52 62	427		55.21	447		57.79	467		60.38	487		62.97
408		52.75	428		55.34	448		57.92	468		60 51	488		63.09
409		52.88	429		55.47	449		58.05	469		60.64	489		63.22
410		53.01	**430**		55.60	**450**		58.18	**470**		60.77	**490**		63.35
411		53.14	431		55.73	451		58.31	471		60.90	491		63.48
412		53.27	432		55.85	452		58.44	472		61.03	492		63.61
413		53.40	433		55.98	453		58.57	473		61.15	493		63.74
414		53.53	434		56.11	454		58.70	474		61.28	494		63.87
415		53.66	435		56.24	455		58.83	475		61.41	495		64.00
416		53.79	436		56.37	456		58.96	476		61.54	496		64.13
417		53.92	437		56.50	457		59.09	477		61.67	497		64.26
418		54.04	438		56.63	458		59.22	478		61.80	498		64.39
419		54.17	439		56.76	459		59.35	479		61.93	499		64.52

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

500 to 600 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
500		64.65	**520**		67.23	**540**		69.82	**560**		72.40	**580**		74.99
501		64.78	521		67.36	541		69.95	561		72.53	581		75.12
502		64.91	522		67.49	542		70.08	562		72.66	582		75.25
503		65.03	523		67.62	543		70.21	563		72.79	583		75.38
504		65.16	524		67.75	544		70.34	564		72.92	584		75.51
505		65.29	525		67.88	545		70.46	565		73.05	585		75.64
506		65.42	526		68.01	546		70.59	566		73.18	586		75.77
507		65.55	527		68.14	547		70.72	567		73.31	587		75.89
508		65.68	528		68.27	548		70.85	568		73 44	588		76.02
509		65.81	529		68.40	549		70.98	569		73.56	589		76.15
510		65.94	**530**		68.53	**550**		71.11	**570**		73.69	**590**		76.28
511		66.07	531		68.65	551		71.24	571		73.82	591		76.41
512		66.20	532		68.78	552		71.37	572		73.95	592		76.54
513		66.33	533		68.91	553		71.50	573		74.08	593		76.67
514		66.46	534		69.04	554		71.63	574		74.21	594		76.80
515		66.59	535		69.17	555		71.76	575		74.34	595		76.93
516		66.72	536		69.30	556		71.89	576		74.47	596		77.06
517		66.84	537		69.43	557		72.02	577		74.60	597		77.19
518		66.97	538		69.56	558		72.15	578		74.73	598		77.32
519		67.10	539		69.69	559		72.27	579		74.86	599		77.45

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

600 to 700 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
600		77.58	**620**		80.16	**640**		82.75	**660**		85.33	**680**		87.92
601		77.71	621		80.29	641		82.88	661		85.46	681		88.05
602		77.83	622		80.42	642		83.01	662		85.59	682		88.18
603		77.96	623		80.55	643		83.14	663		85.72	683		88.31
604		78.09	624		80.68	644		83.26	664		85.85	684		88.44
605		78.22	625		80.81	645		83.39	665		85.98	685		88.57
606		78.35	626		80.94	646		83.52	666		86.11	686		88.69
607		78.48	627		81.07	647		83.65	667		86.24	687		88.82
608		78.61	628		81.20	648		83.78	668		86 37	688		88.95
609		78.74	629		81.33	649		83.91	669		86.50	689		89.08
610		78.87	**630**		81.45	**650**		84.04	**670**		86.63	**690**		89.21
611		79.00	631		81.58	651		84.17	671		86.76	691		89.34
612		79.13	632		81.71	652		84.30	672		86.88	692		89.47
613		79.26	633		81.84	653		84.43	673		87.01	693		89.60
614		79.39	634		81.97	654		84.56	674		87.14	694		89.73
615		79.52	635		82.10	655		84.69	675		87.27	695		89.86
616		79.64	636		82.23	656		84.82	676		87.40	696		89.99
617		79.77	637		82.36	657		84.95	677		87.53	697		90.12
618		79.90	638		82.49	658		85.07	678		87.66	698		90.25
619		80.03	639		82.62	659		85.20	679		87.79	699		90.38

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

700 to 800 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
700		90.51	**720**		93.09	**740**		95.68	**760**		98.26	**780**	1	00.85
701		90.63	721		93.22	741		95.81	761		98.39	781	1	00.98
702		90.76	722		93.35	742		95.94	762		98.52	782	1	01.11
703		90.89	723		93.48	743		96.06	763		98.65	783	1	01.24
704		91.02	724		93.61	744		96.19	764		98.78	784	1	01.37
705		91.15	725		93.74	745		96.32	765		98.91	785	1	01.49
706		91.28	726		93.87	746		96.45	766		99.04	786	1	01.62
707		91.41	727		94.00	747		96.58	767		99.17	787	1	01.75
708		91.54	728		94.13	748		96.71	768		99.30	788	1	01.88
709		91.67	729		94.25	749		96.84	769		99.43	789	1	02.01
710		91.80	**730**		94.38	**750**		96.97	**770**		99.56	**790**	1	02.14
711		91.93	731		94.51	751		97.10	771		99.68	791	1	02.27
712		92.06	732		94.64	752		97.23	772		99.81	792	1	02.40
713		92.19	733		94.77	753		97.36	773		99.94	793	1	02.53
714		92.32	734		94.90	754		97.49	774	1	00.07	794	1	02.66
715		92.44	735		95.03	755		97.62	775	1	00.20	795	1	02.79
716		92.57	736		95.16	756		97.75	776	1	00.33	796	1	02.92
717		92.70	737		95.29	757		97.87	777	1	00.46	797	1	03.05
718		92.83	738		95.42	758		98.00	778	1	00.59	798	1	03.18
719		92.96	739		95.55	759		98.13	779	1	00.72	799	1	03.31

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

800 to 900 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
800	1	03.43	**820**	1	06.02	**840**	1	08.61	**860**	1	11.19	**880**	1	13.78
801	1	03.56	821	1	06.15	841	1	08.74	861	1	11.32	881	1	13.91
802	1	03.69	822	1	06.28	842	1	08.86	862	1	11.45	882	1	14.04
803	1	03.82	823	1	06.41	843	1	08.99	863	1	11.58	883	1	14.17
804	1	03.95	824	1	06.54	844	1	09.12	864	1	11.71	884	1	14.29
805	1	04.08	825	1	06.67	845	1	09.25	865	1	11.84	885	1	14.42
806	1	04.21	826	1	06.80	846	1	09.38	866	1	11.97	886	1	14.55
807	1	04.34	827	1	06.93	847	1	09.51	867	1	12.10	887	1	14.68
808	1	04.47	828	1	07.05	848	1	09.64	868	1	12 2.	888	1	14.81
809	1	04.60	829	1	07.18	849	1	09.77	869	1	12.36	889	1	14.94
810	1	04.73	**830**	1	07.31	**850**	1	09.90	**870**	1	12.48	**890**	1	15.07
811	1	04.86	831	1	07.44	851	1	10.03	871	1	12.61	891	1	15.20
812	1	04.99	832	1	07.57	852	1	10.16	872	1	12.74	892	1	15.33
813	1	05.12	833	1	07.70	853	1	10.29	873	1	12.87	893	1	15.46
814	1	05.24	834	1	07.83	854	1	10.42	874	1	13.00	894	1	15.59
815	1	05.37	835	1	07.96	855	1	10.55	875	1	13.13	895	1	15.72
816	1	05.50	836	1	08.09	856	1	10.67	876	1	13.26	896	1	15.85
817	1	05.63	837	1	08.22	857	1	10.80	877	1	13.39	897	1	15.98
818	1	05.76	838	1	08.35	858	1	10.93	878	1	13.52	898	1	16.11
819	1	05.89	839	1	08.48	859	1	11.06	879	1	13.65	899	1	16.23

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.
530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF SILVER

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

900 to 1000 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
900	1	16.36	**920**	1	18.95	**940**	1	21.54	**960**	1	24.12	**980**	1	26.71
901	1	16.49	921	1	19.08	941	1	21.66	961	1	24.25	981	1	26.84
902	1	16.62	922	1	19.21	942	1	21.79	962	1	24.38	982	1	26.97
903	1	16.75	923	1	19.34	943	1	21.92	963	1	24.51	983	1	27.09
904	1	16.88	924	1	19.47	944	1	22.05	964	1	24.64	984	1	27.22
905	1	17.01	925	1	19.60	945	1	22.18	965	1	24.77	985	1	27.35
906	1	17.14	926	1	19.73	946	1	22.31	966	1	24.90	986	1	27.48
907	1	17.27	927	1	19.85	947	1	22.44	967	1	25.03	987	1	27.61
908	1	17.40	928	1	19.98	948	1	22.57	968	1	25 16	988	1	27.74
909	1	17.53	929	1	20.11	949	1	22.70	969	1	25.28	989	1	27.87
910	1	17.66	**930**	1	20.24	**950**	1	22.83	**970**	1	25.41	**990**	1	28.00
911	1	17.79	931	1	20.37	951	1	22.96	971	1	25.54	991	1	28.13
912	1	17.92	932	1	20.50	952	1	23.09	972	1	25.67	992	1	28.26
913	1	18.04	933	1	20.63	953	1	23.22	973	1	25.80	993	1	28.39
914	1	18.17	934	1	20.76	954	1	23.35	974	1	25.93	994	1	28.52
915	1	18.30	935	1	20.89	955	1	23.47	975	1	26.06	995	1	28.65
916	1	18.43	936	1	21.02	956	1	23.60	976	1	26.19	996	1	28.78
917	1	18.56	937	1	21.15	957	1	23.73	977	1	26.32	997	1	28.91
918	1	18.69	938	1	21.28	958	1	23.86	978	1	26.45	998	1	29.03
919	1	18.82	939	1	21.41	959	1	23.99	979	1	26.58	999	1	29.16
							1000	1	29.29					

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

PARTIAL LIST OF

Assay Materials and Chemicals,

FOR SALE BY

JUSTINIAN CAIRE,

530 & 532 Washington Street, SAN FRANCISCO.

Gold Scales, tin Box, 4 oz.....
Gold Scales, tin Box, 8 oz.....
Gold Scales, leather Case, 4 oz.....
Gold Scales, leather Case, 8 oz.....
Gold Scales, Mahogany Box each, 8, 12, 16, 32, 64 and 96 oz.....
Bullion Balances, 128 oz.....
Bullion Balances, 200 oz.....
Bullion Balances, 500 oz.....
Bullion Balances, Troemner Iron Beam, 1500 oz. well adapted for Silver Bullion, complete with 1500 oz Weights.....
Bullion Balances, Troemner, brass beam, capacity 1500 oz, well adapted for Gold and Silver Bullion, with weights complete.
Bullion Balances, Becker's improved with Iron Base, suitable for Gold and Silver Bullion, sensible to 1 grain, with 2000 oz. load complete with 2000 oz. of weights
Assay Balances, Oertling's, made expressly for traveling.....
Assay Balances, Oertling's No. 12 without weights.....
Assay Balances, Oertling's No. 11 without weights.....
Assay Balances, Oertling's No. 10 with 1 Set of Weights.....
Assay Balances, Becker's No. 1 without weights
Assay Balances, Becker's No. 2 with weights. This balances packs in a small compass, suitable for traveling.....
Assay Balances, Becker's No. 3 without weights
Assay Balances, Becker's No. 5 without weights. This balance is provided with rider apparatus, the beam is divided for the same
Assay Balances, J. Caire's No. 3. This Balance is sensible to 1-1000 of 10 grains, and is suitable for a cheap Balance for prospecting.....
Pulp Scales, French Mahogany Case.....
Pulp Scales, French Mahogany Case, with Marble top.....
Pulp Scales, Becker's No. 14 turning to 1-50 of grain, the best Pulp Scale made.....

Fine Balances for Assaying Copper.....
Chemical Balances, Becker's No. 7 provided with specific gravity apparatus...
Assay Weights, Oertling's Ivory Box 1000 to 10 grains.....
Assay Weights, Oertling's Ivory Box, 1000 to 1 gramme.....
Assay Weights, Oertling's Ivory Box, 1000 to ½ gramme.....
Assay Weights, Oertling's 100 grammes to 1-1000 of gramme.....
Assay Weights, Oertling's 1000 grains to 1-1000 of grain.....
Assay Weights, Becker's 1 gramme to 1-1000 gramme.....
Assay Weights, Becker's 10 grains to 1-1000 of 1 grain.....
Assay Weights, Troemner's 10 grains to 1-1000 of 10. These weights are suitable whenever cheap and accurate weights are required.....
Assay Ton Weights, Becker's.....
Block Troy Weights, for Bullion Scales.
Bullion Weights, decimal tenths and hundreths, 1000 grammes down.....
Bullion Weights, 500 grammes down.....
Bullion Weights, 200 grammes down.....
Bullion Weights, 100 grammes down.....
Assay Furnaces, Iron lined suitable for Cupeling and Melting, 12 in. inside diameter, extra heavy, No. 4.....
Assay furnaces, Iron lined same as above, 12 in. inside diameter, heavy No. 3.....
Assay Furnaces, Iron lined for Cupeling and Melting, 11 in. insid,e heavy No. 2.
Assay Furnaces, Iron lined for Cupeling and Melting, 10 in. inside, light, No. 1.
Assay Furnaces, French Clay, No. 2.....
do do do do No. 3.....
Fletcher's Gas, Assay Furnaces.....
Fletcher's Gas, Blast Furnaces.....
French Clay Melting Furnaces No. 0 to 7.
Muffles, 12 x 6 x 5, for Scorification.....
Muffles, 11 in. by the dozen
Muffles, mint by the dozen.....
Muffles, 9 in. by the dozen.....
Tongs small, for Crucibles, each.....
Tongs small, for Cupeling, made of Steel.
Tongs small, for Scorification.....
Tongs wooden, for Matrasses.....

Tongs wooden, for Test Tubes.....
Cupel Moulds, Brass, every size.....
Cupel Moulds, Iron, every size.....
Scorifier Moulds, Brass, every size.....
Assay Moulds, for pouring Shallow.....
Assay Moulds, for Conical deep.....
Ingot Moulds, 4 parts for Sample Bars...
Ingot Moulds, for all sizes, Bars up to 2000 oz.....
Crucibles, Black Lead all sizes, down to No. 12. (Dixon's).....
Crucibles, Black Lead to Nos. 10, 8, 4, 2 and 1.....
Crucible Covers, Black Lead, every sizes.
Crucible Covers, Clay.....
Crucibles, (French) Assay, No. 1 to 4, per dozen.....
Crucibles, French Assay, Nos. 5 and 6...
Crucibles, French Assay, No. 7.....
Crucibles, French Assay, No. 8.....
Crucibles, French Assay, No. 9.....
Crucibles, French Assay, No. 10.....
Crucibles, French Assay, No. 12 to 20...
Crucibles, (English,) suitable whenever a cheaper and inferior article is wanted, all sizes always on hand.....
Crucibles Clay, (Excelsior,) No. 7.....
Crucibles Clay, " No. 8.....
Crucibles Clay, " No. 9.....
Crucibles Clay, " No. 10.....

These Crucibles are Superior to the English and cost very little more.

Crucibles, (Sand or Hessian,) Nested Triangular, 4s, per dozen Nest.....
Crucibles, (Sand or Hessian,) Nested Triangular, 5s, per dozen Nest.
Crucibles, (Sand or Hessian,) Nested Triangular, 6s, per dozen Nest.....
Crucibles, (Sand or Hessian,) Nested Triangular, 8s, per dozen Nest.....
Crucibles, (Sand or Hessian,) Nested Round, 4s, per dozen Nest.....
Crucibles, (Sand or Hessian,) Nested Round, halves, per Nest.....
Crucibles, (Berlin Porcelain,) with Covers, No. 00 to No. 6.....
Crucibles, Iron, to Order.....
Crucibles, (Platinum,) all sizes.....
Scorifiers (French,) per dozen
Scorifiers (English,) per dozen.....
Dishes of Black Lead, for Roasting.....
Dishes of French Clay, for Roasting.....
Mortars and Pestles, Iron, 2 gall.....
Mortars and Pestles, Iron, 1 gall.....
Mortars and Pestles, Iron, ½ gall
Mortars and Pestles, Iron, ¼ gall.....
Mortars and Pestles, Iron, pint sizes.....
Mortars and Pestles, Wedge Wood, all sizes.....
Mortars and Pestles, Porcelain, all sizes.
Mortars and Pestles, (Bucks) for amalgamating.....
Mortars and Pestles, Agate, from 1½ to 6 in. diameter.....
Mortars and Pestles, Steel. for Blow Pipe Assay.....
Retorts and Pipes, (Iron) all sizes
do do (Glass) all sizes and Receivers.....
Adapters of Glass for connecting Retorts.
Dry Cups (or Annealing Cups) English common, per dozen.....
Dry Cups (or Annealing Cups,) French best, per dozen.....
Glass Evaporating Dishes, all sizes.....
Porcelain Evaporating Dishes, all sizes...
Platinum Evaporating Dishes, all sizes...
Blow Pipe Cupel Holders and Moulds....
Blow Pipe, Ivory Scales for measuring buttons.....
Blow Pipe Crucible Moulds.....
Blow Pipe Spoons, Ivory & Metallic.....
Blow Pipe Magnets.....
Blow Pipe Hammers and Anvils.....
Blow Pipes, Glass Measures.....
Filtering Stands, Iron (3 Rings.).....
do do Wood (2 Rings.).....
Burette Holders, Wood, single.....
do do do double.....
Wooden Supports, various sizes, for use in Laboratory.....
Test Tubes, Glass, 5 to 8 in.....
Test Tubes, Glass, on foot.....
Test Tube Racks all kinds.....
Test Tube Brushes.....
Glass Flasks, for assaying, ½ oz. to 2 oz. all shapes.....
Glass Flasks, for Boiling, 4 to 64 oz.....
Spirit Lamps, Glass, all sizes and shapes.
Spirit Lamps, Brass.....
Blow Pipe Lamps, Platners.....
do do do Fletcher.....
do do Self Acting, Nos. 1, 2, & 3...
Blast Lamp Russian.....
Berzelius Argand Spirit Lamps.....
Beaker Glasses, Nested (3) per Nests....
do do do (5) do.....
do do do 8 do.....
do do do 10 & 12 do.....
Wolf's Bottles, two necks.....
Wolf's Bottles, three necks.....
Washing Bottles.....
Bell Glass Receivers, various sizes.....
Graduated Measures, 1 oz. to 32 oz.....
do do 1 gramme to 1000 grammes.....
Graduated Flasks, 25 c c. to 1000 c c.....
Graduated Cylinders, 250 c c.....
Graduated Cylinders, 500 c c.....
Graduated Cylinders, 1000 c c.....
Mohr's Graduated Burettes all sizes.....

Mohr's Graduated Burettes with Glass Faucets.....
Mohr's Pinch Cocks.....
Bink's Burettes.....
Gay Lussac Burettes.....
Geisler Burettes.....
Bulb Pipettes, Plain.....
Bulb Pipettes, Graduated.....
Specific Gravity Bottles.....
Funnels, Porcelain.....
Funnels, Hard Rubber.....
Funnels Iron Enameled, for Quicksilver.
Glass Tubing, per lb.....
Glass Tubing, (Scotch) for Steam Guage
Rubber Tubing, per foot.....
Hydrometers for Acids all liquids.....
Jars on foot for Hydrometers.....
Reagent Bottles, all sizes.....
Salt Mouth Bottles, (Glass Stoppers,) all sizes.....
Sieves (Brass,) Nos. 30, 40, 50, 60, 70, 80, 90, and 100.....
Chemical Thermometers, all sizes.....
Common Thermometers, all sizes.....
Test Papers.....
Filter Paper, Cut Round (grey.).....
Filter Paper, Cut Round (white.).....
Filter Paper, common, per quire.....
Assayer's Mittens.....
Acid Gloves, Rubber.....
Charcoal Borers, all shapes.....
Cork Borers, all sizes, in sets
Condensers (Liebig.).....
Platinum Wire Foil and Sponge.....
Aluminium Wire and Foil.....
Magnesium Wire and Ribbon.....
Spatulas, Steel Porcelain and Horn.....
Scoops (Horn,) for Washing.....
Copper Stills and Condensers, complete, ½, 1 and 2 gallons.....
Precipitating Jars.....
Rubber Corks for Gas Bottles.....
Gas Furnaces, all kinds.....
Gas Furnaces, (Fletchers,) Black.....
Coal Oil Furnaces.....
Gas Burners, (Bunsen,) all kinds.....
Tripods.....
Safety Tubes.....
Acid Funnels.....
Common Blow Pipes.....
Hot Air Blow Pipes, (Fletchers.).....
Fine Blow Pipes, (Lingke,) nickel Plated.
Platinum Blow Pipe points.....
Blow Pipe Apparatus, all kinds.....
Humid Assay Apparatus, for Assay of Silver by the humid method with Reservoir, Silver Stop Cocks, Pipettes, Agitators etc., etc.....
Pipettes, extra 100 c c.....
Pipettes, extra 5 c c.....
Water Baths of Copper, 5 Rings.....
Copper drying Ovens.....
Touch Stones.....
Camel Hair Brushes.....
Button Brushes.....
Scratch Brushes.....
Dust Brushes, and a full assortment of Chemical Glassware, etc.....

Assayers' Hardware, Etc.

Mining pans.....
Quiksilver Kettles.....
Quicksilver Dippers.....
Quicksilver Scrapers
Mill Sponges
Chamois Skins.....
Steel Dies or letters for Stamping Bars.
Steel Figures for Stamping Bars.....
Steel Stamps : oz, No., $ and Fine.....
do do Value Total, Gold & Silver
do do with name cut to order.....
Steel Anvils.....
Steel Chisels
Hammers for Assayers.....
Cutting Shears for Assayers.....
Cutting Plyers for Assayers.....
Pincets for Assay Weights.....
Forceps with platinum points.....
Rolling Mills, 2½, 3 and 4 inches.....
Magnets, 2 to 12 inches.....
Files, all shapes and sizes
Melting Laddles.....

Brass Wire Screens for Quartz Mills.

No. 4 to 30.....
Nos. 35 and 40.....
Nos. 45 and 50.....
Nos. 55 and 60
No. 60.....
No. 70.....
No. 80.....
No. 90
No. 100.....
Steel Wire Cloth, No. 20 to 60.....

SUNDRIES.

Surveyor's Chains.....
Microscopes of all kinds.....
Pocket Magnifying Glasses.....
Magnify Glasses, all sizes and shapes....
Pocket Compasses, all kinds..
Mining Compasses, all kinds.....
Aneroid Barometers.....
Altitude Barometers.....
Pocket Barometers
Self Registering Thermometers.....
Chesterman's Metallic and Steel Tapes..

BOOKS.

Mitchell's on Assaying.....
Philip's on Assaying.....

Rickett's on Assaying.....
Dana's Mineralogy.....
Brush's Mineralogy.....
Craft's Quantitative Analysis.....
Platner's on Blow Pipe.....
Cooke Chemical Philosophy.....
Ure's Mineral Dictionary, etc. etc.....

Acids and Chemicals.

C. P. Nitric Acid, in Carboys.....
do do in 7 lb. bottles.....
do do in 1 lb. bottles.....
C. P. Muriatic Acid, 6 lb. bottles.....
C. P. Muriatic Acid, 1 lb. bottles.....
C. P. Sulphuric Acid, 9 lb. bottles.....
C. P. Sulphuric Acid, 1 lb. bottles.....
Commercial Nitric Acid, in Carboys; strongest.
Commercial Muriatic Acid, in Carboys...
Commercial Sulphuric Acid, in Carboys..
Additional charge for Carboys, $25 each.....
.....
Bi-Carb. Soda.....
Litharge.....
Bone Ashes.....
Borax.....
Refined Nitre.....
Argol.....
Carbonate of Potash.....
Sulphate Copper.....
Sulphate Iron.....
Quicksilver.....
Black Oxide Manganese.....
Sodium, in 1 lb. tins.....
Sodium Amalgam.....
Assay Lead, in bars, pure.....
Assay Lead, Granulated, pure.....
Assay Lead, Rolled in sheets, pure.....
Microcosmic Salt.....
Black Flux.....
White Flux.....
Ammonia FFF.....
Ammonia Sulphide.....
Ammonia Molybdate.....
Chloride Barium.....
Sulphate Baryta.....
Nitrate Baryta.....
Carbonate Baryta.....
Chloride Calcium.....
Sulphate Potassium.....
Oxalate Ammonia.....
Pure Zinc Granulated.....
Pure Copper.....
Proof Silver in sheets.....
Potassium.....
Bismuth.....
Nitrate Soda.....
Sulphide Sodium.....
Fluorspar.....
Pearl Ashes.....
Soda Ashes.....
Antimony.....
Bismuth.....
Metallic Arsenic.....
Nitrate of Silver.....
Nitrate of Cobalt.....
Metallic of Cobalt.....
Oxide of Cobalt.....
Sulphate Cobalt.....
Chloride of Cobalt.....
Chloride of Gold.....
Chloride of Silver.....
Chloride of Platinum.....
Corrosive Sublimate.....
Cyanide of Potassium, 1 lb. bottle.....
do do 10 lb. can Eastern
do do 10 lb. " California
Dried Carbonate of Soda.....
Concentrated Lye.....
Rochelle Salts.....
Sulphur.....
Brimstone.....
Hyposulphite of Soda.....
Acetic Acid.....
Caustic Potash.....
Acetic Either.....
Sulphuric Either.....
Carbonate of Ammonia.....
Sulfuret of Iron, etc., etc.....

And a full and complete assortment of

REAGENTS AND CHEMICALS

ALWAYS ON HAND.

Orders for rare Chemicals and Reagents will always have our careful attention.

PROPERTIES OF GOLD.

Gold has been known from the earliest ages, and we find representations of Gold-washing and melting on Egyptian tombs dating back to 2,500 B. C.

The alchemists called it the king of metals and gave it the symbol of the sun. The Latin name for it is Aurum from which its chemical symbol Au. is abbreviated.

It is the most ductile of metals, but the slightest admixture of other metals impairs its ductility.

Its atomic Weight is 196, its mean specific gravity 19.33, it melts at 20.12° F. and in cooling contracts more than any other metal. In the oxyhydrogen flame or the spark of a strong electric battery fine Gold wire can be volatilized.

Gold is insoluble in Nitric-Sulphuric or Muriatic Acids, but Chlorine or mixtures evolving Chlorine as well as Bromine dissolve it. Nitromuriatic Acid (Aqua Regia) is generally used for the purpose.

It readily amalgamates with Quicksilver and alloys with most metals by fusion with them.

From its solution Gold is precipitated by Sulphureted Hydrogen as black Sulphide of Gold, which is insoluble in Nitric Acid, but soluble in Aqua Regia and in yellow Sulphide of Ammonium.

Ammonia precipitates reddish yellow fulminating Gold (a very explosive Compound).

Salts of Protoxide of Iron, Arsenious Acid, Protochloride of Antimony, Sulphurous Acid, Oxalic Acid and many other organic compounds. precipitate metallic Gold as a reddish brown powder.

Protochloride of Tin produces even in dilute solution of Gold a beautiful purple coloration and precipitate.

Before the blowpipe Gold, if pure, fuses to a bright bead without incrustation. Gold is found in its native state alloyed with from 6 to 16 per cent. of Silver, in pyrites, and in Tellurites. Traces of Gold are said to have been found in the water of the ocean.

Removed to
521 & 523 Market Street, C.

We are indebted to Messrs. Falkenau & Reese, Assayers, for the above article.

NOTE TO GOLD TABLE.

The following Gold Table containing the value per oz. is calculated from the basis that 387 oz. of *pure* Gold (1000 fine) is worth $8000. Hence 1 oz. is worth $20.671834625, and the $\frac{1}{1000}$ of an oz. (decimally expressed as .001 fine) is worth $0.020671834625. 1 grain = 4.295 ugets

What we usually call *fineness*, therefore, is simply the *weight* of *fine* metal contained in a given quantity of mixed metals or alloys. For instance in a Gold or Silver bar which is reported to be 850 fine, it is simply meant that in 1000 parts *by weight*, 850 are *fine* gold or *fine* silver, as the case may be.

In our mints, the value of gold is computed from *standard* weight; that is, gold which is 900 fine, that being the *fineness* of our gold coin as required by law. The *formula* in this case is, 43 oz. of *standard* gold are worth $800. Hence, multiply standard oz. by 800, and divide by 43, and you obtain the value.

EXAMPLE:—Take $126\frac{15}{100}$ oz. at 856 fine, and we obtain the result thus:

126.15 oz.
856 fineness of gold.

756 90
6 307 5
100 920

U. S. standard, 900) 107,984.40 oz. of fine gold.

119,982 oz. standard gold.
800

43) 95,985.600

$2,232.22 value.

To find value per oz., divide total value ($2,232.22) by standard oz. (119.982) and you have $18.60[48] which will be seen by reference to the table is the value of 1 oz. of gold at 900 fine.

The value in this case would have been ascertained thus: By reference to the Gold Table and opposite 856, the value of one oz. 856 fine is $17,69.51. Hence,

126.15 oz.
176951

126 15
6 307 5
113 535
756 90
8 830 5
12 615

$2,232.22 value.

One grain of pure gold = $0.042954 9
at 16 gr. silver to one of gold
One grain pure silver = $0.002 68468
one pound avoir du pois = 18.7922
at 15.5 to one. the silver grain = 0.002771 3
1 lb av. the. = $19.3991
diff. in value = $0.60.69

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

0 to 100 fine.

	FINE	DOLLARS	CENTS		FINE	DOLLARS	CENTS		FINE	DOLLARS	CENTS		FINE.	DOLLARS	CENTS		FINE	DOLLARS	CENTS
00	0		00.00	20			41.34	40			82.69	60		1	24.03	80		1	65.37
	1		02.07		21		43.41		41		84.75		61	1	26.10		81	1	67.44
	2		04.13		22		45.48		42		86.52		62	1	28.17		82	1	69.51
	3		06.20		23		47.55		43		88.89		63	1	30.23		83	1	71.58
	4		08.27		24		49.61		44		90.96		64	1	32.30		84	1	73.64
	5		10.34		25		51.68		45		93.02		65	1	34.37		85	1	75.71
	6		12.40		26		53.75		46		95.09		66	1	36.43		86	1	77.78
	7		14.47		27		55.81		47		97.16		67	1	38.50		87	1	79.84
	8		16.54		28		57.88		48		99.22		68	1	40.57		88	1	81.91
	9		18.60		29		59.95		49	1	01.29		69	1	42.64		89	1	83.98
10			20.67	30			62.02	50		1	03.36	70		1	44.70	90		1	86.05
	11		22.74		31		64.08		51	1	05.43		71	1	46.77		91	1	88.11
	12		24.81		32		66.15		52	1	07.49		72	1	48.84		92	1	90.18
	13		26.87		33		68.22		53	1	09.56		73	1	50.90		93	1	92.25
	14		28.94		34		70.28		54	1	11.63		74	1	52.97		94	1	94.32
	15		31.01		35		72.35		55	1	13.70		75	1	55.04		95	1	96.38
	16		33.07		36		74.42		56	1	15.76		76	1	57.11		96	1	98.45
	17		35.14		37		76.49		57	1	17.83		77	1	59.17		97	2	00.52
	18		37.21		38		78.55		58	1	19.90		78	1	61.24		98	2	02.58
	19		39.28		39		80.62		59	1	21.96		79	1	63.31		99	2	04.65

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.
530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

100 to 200 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
100	2	06.72	**120**	2	48.06	**140**	2	89.41	**160**	3	30.75	**180**	3	72.09
101	2	08.79	121	2	50.13	141	2	91.47	161	3	32.82	181	3	74.16
102	2	10.85	122	2	52.20	142	2	93.54	162	3	34.88	182	3	76.23
103	2	12.92	123	2	54.26	143	2	95.61	163	3	36.95	183	3	78.29
104	2	14.99	124	2	56.33	144	2	97.67	164	3	39.02	184	3	80.36
105	2	17.05	125	2	58.40	145	2	99.74	165	3	41.09	185	3	82.43
106	2	19.12	126	2	60.46	146	3	01.81	166	3	43.15	186	3	84.50
107	2	21.19	127	2	62.53	147	3	03.88	167	3	45.22	187	3	86.56
108	2	23.26	128	2	64.60	148	3	05.94	168	3	47.29	188	3	88.63
109	2	25.32	129	2	66.67	149	3	08.01	169	3	49.35	189	3	90.70
110	2	27.39	**130**	2	68.73	**150**	3	10.08	**170**	3	51.42	**190**	3	92.76
111	2	29.46	131	2	70.80	151	3	12.14	171	3	53.49	191	3	94.83
112	2	31.52	132	2	72.87	152	3	14.21	172	3	55.56	192	3	96.90
113	2	33.59	133	2	74.94	153	3	16.28	173	3	57.62	193	3	98.97
114	2	35.66	134	2	77.00	154	3	18.35	174	3	59.69	194	4	01.03
115	2	37.73	135	2	79.07	155	3	20.41	175	3	61.76	195	4	03.10
116	2	39.79	136	2	81.14	156	3	22.48	176	3	63.82	196	4	05.17
117	2	41.86	137	2	83.20	157	3	24.55	177	3	65.89	197	4	07.24
118	2	43.93	138	2	85.27	158	3	26.61	178	3	67.96	198	4	09.30
119	2	45.99	139	2	87.34	159	3	28.68	179	3	70.03	199	4	11.37

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

200 to 300 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE.	DOLLARS	CENTS	FINE	DOLLARS	CENTS
200	4	13.44	**220**	4	54.78	**240**	4	96.12	**260**	5	37.47	**280**	5	78.81
201	4	15.50	221	4	56.85	241	4	98.19	261	5	39.53	281	5	80.88
202	4	17.57	222	4	58.91	242	5	00.26	262	5	41.60	282	5	82.95
203	4	19.64	223	4	60.98	243	5	02.33	263	5	43.67	283	5	85.01
204	4	21.71	224	4	63.05	244	5	04.39	264	5	45.74	284	5	87.08
205	4	23.77	225	4	65.12	245	5	05.46	265	5	47.80	285	5	89.15
206	4	25.84	226	4	67.18	246	5	08.53	266	5	49.87	286	5	91.21
207	4	27.91	227	4	69.25	247	5	10.59	267	5	51.94	287	5	93.28
208	4	29.97	228	4	71.32	248	5	12.66	268	5	54.01	288	5	95.35
209	4	32.04	229	4	73.39	249	5	14.73	269	5	56.07	289	5	97.42
210	4	34.11	**230**	4	75.45	**250**	5	16.80	**270**	5	58.14	**290**	5	99.48
211	4	36.18	231	4	77.52	251	5	18.86	271	5	60.21	291	6	01.55
212	4	38.24	232	4	79.59	252	5	20.93	272	5	62.27	292	6	03.62
213	4	40.31	233	4	81.65	253	5	23.00	273	5	64.34	293	6	05.68
214	4	42.38	234	4	83.72	254	5	25.06	274	5	66.41	294	6	07.75
215	4	44.44	235	4	85.79	255	5	27.13	275	5	68.48	295	6	09.82
216	4	46.51	236	4	87.86	256	5	29.20	276	5	70.54	296	6	11.89
217	4	48.58	237	4	89.92	257	5	31.27	277	5	72.61	297	6	13.95
218	4	50.65	238	4	91.99	258	5	33.33	278	5	74.68	298	6	16.02
219	4	52.71	239	4	94.06	259	5	35.40	279	5	76.74	299	6	18.09

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.
530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

300 to 400 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
300	6	20.16	**320**	6	61.50	**340**	7	02.84	**360**	7	44.19	**380**	7	85.53
301	6	22.22	321	6	63.57	341	7	04.91	361	7	46.25	381	7	87.60
302	6	24.29	322	6	65.63	342	7	06.98	362	7	48.32	382	7	89.66
303	6	26.36	323	6	67.70	343	7	09.04	363	7	50.39	383	7	91.73
304	6	28.42	324	6	69.77	344	7	11.11	364	7	52.45	384	7	93.80
305	6	30.49	325	6	71.83	345	7	13.18	365	7	54.52	385	7	95.87
306	6	32.56	326	6	73.90	346	7	15.25	366	7	56.59	386	7	97.93
307	6	34.63	327	6	75.97	347	7	17.31	367	7	58.65	387	8	00.00
308	6	36.69	328	6	78.04	348	7	19.38	368	7	60.72	388	8	02.07
309	6	38.76	329	6	80.10	349	7	21.45	369	7	62.79	389	8	04.13
310	6	40.83	**330**	6	82.17	**350**	7	23.51	**370**	7	64.86	**390**	8	06.20
311	6	42.89	331	6	84.24	351	7	25.58	371	7	66.93	391	8	08.27
312	6	44.96	332	6	86.30	352	7	27.65	372	7	68.99	392	8	10.34
313	6	47.03	333	6	88.37	353	7	29.72	373	7	71.06	393	8	12.40
314	6	49.10	334	6	90.44	354	7	31.78	374	7	73.13	394	8	14.47
315	6	51.16	335	6	92.51	355	7	33.85	375	7	75.19	395	8	16.54
316	6	53.23	336	6	94.57	356	7	35.92	376	7	77.26	396	8	18.60
317	6	55.30	337	6	96.64	357	7	37.98	377	7	79.32	397	8	20.67
318	6	57.36	338	6	98.71	358	7	40.05	378	7	81.39	398	8	22.74
319	6	59.43	339	7	00.78	359	7	42.12	379	7	83.46	399	8	24.81

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

400 to 500 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
400	8	26.87	**420**	8	68.22	**440**	9	09.56	**460**	9	50.90	**480**	9	92.25
401	8	28.94	421	8	70.28	441	9	11.63	461	9	52.97	481	9	94.32
402	8	31.01	422	8	72.35	442	9	13.70	462	9	55.04	482	9	96.38
403	8	33.07	423	8	74.42	443	9	15.76	463	9	57.11	483	9	98.45
404	8	35.14	424	8	76.49	444	9	17.83	464	9	59.17	484	10	00.52
405	8	37.21	425	8	78.55	445	9	19.90	465	9	61.24	485	10	02.59
406	8	39.28	426	8	80.62	446	9	21.96	466	9	63.31	486	10	04.65
407	8	41.34	427	8	82.69	447	9	24.03	467	9	65.37	487	10	06.72
408	8	43.41	428	8	84.75	448	9	26.10	468	9	67 44	488	10	08.79
409	8	45.48	429	8	86.82	449	9	28.17	469	9	69.51	489	10	10.85
410	8	47.55	**430**	8	88.89	**450**	9	30.23	**470**	9	71.58	**490**	10	12.92
411	8	49.61	431	8	90.96	451	9	32.30	471	9	73.64	491	10	14.99
412	8	51.68	432	8	93.02	452	9	34.37	472	9	75.71	492	10	17.05
413	8	53.75	433	8	95.09	453	9	36.43	473	9	77.78	493	10	19.12
414	8	55.81	434	8	97.16	454	9	38.50	474	9	79.84	494	10	21.19
415	8	57.88	435	8	99.22	455	9	40.57	475	9	81.91	495	10	23.26
416	8	59.95	436	9	01.29	456	9	42.64	476	9	83.98	496	10	25.32
417	8	62.02	437	9	03.36	457	9	44.70	477	9	86.05	497	10	27.39
418	8	64.08	438	9	05.43	458	9	46.77	478	9	88.11	498	10	29.46
419	8	66.15	439	9	07.49	459	9	48.84	479	9	90.18	499	10	31.52

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

500 to 600 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
500	10	33.59	**520**	10	74.94	**540**	11	16.28	**560**	11	57.62	**580**	11	98.97
501	10	35.66	521	10	77.00	541	11	18.35	561	11	59.69	581	12	01.03
502	10	37.73	522	10	79.07	542	11	20.41	562	11	61.76	582	12	03.10
503	10	39.79	523	10	81.14	543	11	22.48	563	11	63.82	583	12	05.17
504	10	41.86	524	10	83.20	544	11	24.55	564	11	65.89	584	12	07.24
505	10	43.93	525	10	85.27	545	11	26.61	565	11	67.96	585	12	09.30
506	10	45.99	526	10	87.34	546	11	28.68	566	11	70.03	586	12	11.37
507	10	48.06	527	10	89.41	547	11	30.75	567	11	72.09	587	12	13.44
508	10	50.13	528	10	91.47	548	11	32.82	568	11	74 16	588	12	15.50
509	10	52.20	529	10	93.54	549	11	34.88	569	11	76.23	589	12	17.57
510	10	54.26	**530**	10	95.61	**550**	11	36.95	**570**	11	78.29	**590**	12	19.64
511	10	56.33	531	10	97.67	551	11	39.02	571	11	80.36	591	12	21.71
512	10	58.40	532	10	99.74	552	11	41.09	572	11	82.43	592	12	23.77
513	10	60.47	533	11	01.81	553	11	43.15	573	11	84.50	593	12	25.84
514	10	62.53	534	11	03.88	554	11	45.22	574	11	86.56	594	12	27.91
515	10	64.60	535	11	05.94	555	11	47.29	575	11	88.63	595	12	29.97
516	10	66.67	536	11	08.01	556	11	49.35	576	11	90.70	596	12	32.04
517	10	68.73	537	11	10.08	557	11	51.42	577	11	92.76	597	12	34.11
518	10	70.80	538	11	12.14	558	11	53.49	578	11	94.83	598	12	36.18
519	10	72.87	539	11	14.21	559	11	55.56	579	11	96.90	599	12	38.24

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.
530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

600 to 700 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
600	12	40.31	620	12	81.65	640	13	23.00	660	13	64.34	680	14	05.68
601	12	42.38	621	12	83.72	641	13	25.06	661	13	66.41	681	14	07.75
602	12	44.44	622	12	85.79	642	13	27.13	662	13	68.48	682	14	09.82
603	12	46.51	623	12	87.86	643	13	29.20	663	13	70.54	683	14	11.89
604	12	48.58	624	12	89.92	644	13	31.27	664	13	72.61	684	14	13.95
605	12	50.65	625	12	91.99	645	13	33.33	665	13	74.68	685	14	16.02
606	12	52.71	626	12	94.06	646	13	35.40	666	13	76.74	686	14	18.09
607	12	54.78	627	12	96.12	647	13	37.47	667	13	78.81	687	14	20.16
608	12	56.85	628	12	98.19	648	13	39.53	668	13	80.88	688	14	22.22
609	12	58.91	629	13	00.26	649	13	41.60	669	13	82.95	689	14	24.29
610	12	60.98	630	13	02.33	650	13	43.67	670	13	85.01	690	14	26.36
611	12	63.05	631	13	04.39	651	13	45.74	671	13	87.08	691	14	28.42
612	12	65.12	632	13	06.46	652	13	47.80	672	13	89.15	692	14	30.49
613	12	67.18	633	13	08.53	653	13	49.87	673	13	91.21	693	14	32.56
614	12	69.25	634	13	10.59	654	13	51.94	674	13	93.28	694	14	34.63
615	12	71.32	635	13	12.66	655	13	54.01	675	13	95.35	695	14	36.69
616	12	73.39	636	13	14.73	656	13	56.07	676	13	97.42	696	14	38.76
617	12	75.45	637	13	16.80	657	13	58.14	677	13	99.48	697	14	40.83
618	12	77.52	638	13	18.86	658	13	60.21	678	14	01.55	698	14	42.89
619	12	79.59	639	13	20.93	659	13	62.27	679	14	03.62	699	14	44.96

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

700 to 800 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
700	14	47.03	**720**	14	88.37	**740**	15	29.72	**760**	15	71.06	**780**	16	12.40
701	14	49.10	721	14	90.44	741	15	33.78	761	15	73.13	781	16	14.47
702	14	51.16	722	14	92.51	742	15	33.85	762	15	75.19	782	16	16.54
703	14	53.23	723	14	94.57	743	15	35.92	763	15	77.26	783	16	18.60
704	14	55.30	724	14	96.64	744	15	37.98	764	15	79.33	784	16	20.67
705	14	57.36	725	14	98.71	745	15	40.05	765	15	81.40	785	16	22.74
706	14	59.43	726	15	00.78	746	15	42.12	766	15	83.46	786	16	24.81
707	14	61.50	727	15	02.84	747	15	44.18	767	15	85.53	787	16	26.87
708	14	63.57	728	15	04.91	748	15	46.25	768	15	87 60	788	16	28.94
709	14	65.63	729	15	06.98	749	15	48.32	769	15	89.66	789	16	31.01
710	14	67.70	**730**	15	09.04	**750**	15	50.39	**770**	15	91.73	**790**	16	33.07
711	14	69.76	731	15	11.11	751	15	52.45	771	15	93.80	791	16	35.14
712	14	71.83	732	15	13.18	752	15	54.52	772	15	95.87	792	16	37.21
713	14	73.90	733	15	15.25	753	15	56.59	773	15	97.93	793	16	39.28
714	14	75.97	734	15	17.31	754	15	58.66	774	16	00.00	794	16	41.34
715	14	78.04	735	15	19.38	755	15	60.72	775	16	02.07	795	16	43.41
716	14	80.10	736	15	21.45	756	15	62.79	776	16	04.13	796	16	45.48
717	14	82.17	737	15	23.51	757	15	64.86	777	16	06.20	797	16	47.55
718	14	84.27	738	15	25.58	758	15	66.93	778	16	08.27	798	16	49.61
719	14	86.30	739	15	27.65	759	15	68.99	779	16	10.34	799	16	51.68

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

800 to 900 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
800	16	53.75	**820**	16	95.09	**840**	17	36.43	**860**	17	77.78	**880**	18	19.12
801	16	55.81	821	16	97.16	841	17	38.50	861	17	79.84	881	18	21.19
802	16	57.88	822	16	99.22	842	17	40.57	862	17	81.91	882	18	23.26
803	16	59.95	823	17	01.29	843	17	42.64	863	17	83.98	883	18	25.32
804	16	62.02	824	17	03.36	844	17	44.70	864	17	86.05	884	18	27.39
805	16	64.08	825	17	05.43	845	17	46.77	865	17	88.11	885	18	29.46
806	16	66.15	826	17	07.49	846	17	48.84	866	17	90.18	886	18	31.52
807	16	68 22	827	17	09.56	847	17	50.90	867	17	92.25	887	18	33.59
808	16	70.28	828	17	11.63	848	17	52.97	868	17	94 32	888	18	35.66
809	16	72.35	829	17	13.70	849	17	55.04	869	17	96.38	889	18	37.73
810	16	74.42	**830**	17	15.76	**850**	17	57.11	**870**	17	98.45	**890**	18	39.79
811	16	76.49	831	17	17.83	851	17	59.17	871	18	00.52	891	18	41.86
812	16	78.55	832	17	19.90	852	17	61.24	872	18	02.58	892	18	43.93
813	16	80.62	833	17	21.96	853	17	63.31	873	18	04.65	893	18	45.99
814	16	82.69	834	17	24.03	854	17	65.37	874	18	06.72	894	18	48.06
815	16	84.75	835	17	26.10	855	17	67.44	875	18	08.79	895	18	50.13
816	16	86.82	836	17	28.17	856	17	69.51	876	18	10.85	896	18	52.20
817	16	88.89	837	17	30.23	857	17	71.58	877	18	12.92	897	18	54.26
818	16	90.96	838	17	32.30	858	17	73.64	878	18	14.99	898	18	56.33
819	16	93.02	839	17	34.37	859	17	75.71	879	18	17.05	899	18	58.40

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE VALUE OF GOLD

PER OUNCE TROY, AT DIFFERENT DEGREES OF FINENESS.

Prepared for JUSTINIAN CAIRE.

900 to 1000 fine.

FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS	FINE	DOLLARS	CENTS
900	18	60.46	**920**	19	01.81	**940**	19	43.15	**960**	19	84.50	**980**	20	25.84
901	18	62.53	921	19	03.88	941	19	45.22	961	19	86.56	981	20	27.91
902	18	64.60	922	19	05.94	942	19	47.29	962	19	88.63	982	20	29.97
903	18	66.67	923	19	08.01	943	19	49.35	963	19	90.70	983	20	32.04
904	18	68.73	924	19	10.08	944	19	51.42	964	19	92.76	984	20	34.11
905	18	70.80	925	19	12.14	945	19	53.49	965	19	94.83	985	20	36.18
906	18	72.87	926	19	14.21	946	19	55.56	966	19	96.90	986	20	38.24
907	18	74 94	927	19	16.28	947	19	57.62	967	19	98.97	987	20	40.31
908	18	77.00	928	19	18.35	948	19	59.69	968	20	01 03	988	20	42.38
909	18	79.07	929	19	20.41	949	19	61.76	969	20	03.10	989	20	44.44
910	18	81.14	**930**	19	22.48	**950**	19	63.82	**970**	20	05.17	**990**	20	46.51
911	18	83.20	931	19	24.55	951	19	65.89	971	20	07.23	991	20	48.58
912	18	85.27	932	19	26.61	952	19	67.96	972	20	09.30	992	20	50.65
913	18	87.34	933	19	28.68	953	19	70.03	973	20	11.37	993	20	52.71
914	18	89.41	934	19	30.75	954	19	72.09	974	20	13.44	994	20	54.78
915	18	91.47	935	19	32.82	955	19	74.16	975	20	15.50	995	20	56.85
916	18	93.54	936	19	34.88	956	19	76.23	976	20	17.57	996	20	58.91
917	18	95.61	937	19	36.95	957	19	78.29	977	20	19.64	997	20	60.98
918	18	97.67	938	19	39.02	958	19	80.36	978	20	21.70	998	20	63.05
919	18	99.74	939	19	41.08	959	19	82.43	979	20	23.77	999	20	65.12
							1000 \| 20 \| 67.18							

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

TABLE OF THE
RELATIVE VALUE OF AVOIRDUPOIS AND TROY WEIGHTS.

AVOIRDUPOIS OUNCES REDUCED TO TROY WEIGHTS AND GRAINS.

Avoirdupois Ounces.	TROY. Ozs.	Dwts.	Grs.	Grains.
1		18	5½	437½
2	1	16	11	875
3	2	14	16½	1312½
4	3	12	22	1750
5	4	11	3½	2187½
6	5	9	9	2625
7	6	7	14½	3062½
8	7	5	20	3500
9	8	4	1½	3937½
10	9	2	7	4375
11	10	0	12½	4812½
12	10	18	18	5250
13	11	16	23½	5687½
14	12	15	5	6125
15	13	13	10½	6562½
16	14	11	16	7000

TROY OUNCES REDUCED TO AVOIRDUPOIS WEIGHTS AND GRAINS.

Troy Ounces.	AVOIRDUPOIS Ozs.	Drachms.	Grains.
1	1	2	480
2	2	3	960
3	3	5	1440
4	4	6	1920
5	5	8	2400
6	6	9	2880
7	7	11	3360
8	8	12	3840
9	9	14	4320
10	11	0	4800
11	12	1	5280
12	13	3	5760

Removed to 521 & 523 Market Street,

AVOIRDUPOIS.

16 drachms	=1 ounce.	DRACHMS. 256	
16 ounces	=1 pound.		
112 pounds	=1 cwt.	28672 = 1792	
20 cwt	=1 ton	573440 = 35840	2240

TROY

24 grains	=1 dwt.	GRAINS. 480	DWTS.
20 dwt	=1 ounce.		
12 ounces	=1 pound.	5760 =	240

MEXICAN WEIGHTS.

12 granos.....make 1 tomin.....	Equal ..	9.2	grains, Troy.
3 tomines...make 1 adarme.....	" ..	27.7	grains, "
2 adarmes..make 1 ochava or dracma	" ..	55.5	grains, "
8 ochavas...make 1 onza.....	" ..	443.8	grains, or 0.9245 oz. Troy
8 onzas.....make 1 marco.....	" ..	3550.5	grains, or 7.396 oz. Troy
2 marcos...make 1 libra.....	" ..	7101.	grains, or 14.7937 oz. Troy

FRENCH WEIGHTS.

Milligramme, 1-1000 of a gramme.....	Equal.....	0.0154	grains.
Centigramme, 1-100 of a gramme.....	"	0.1544	"
Decigramme, 1-10 of a gramme.....	"	1.5440	"
*Gramme (unit of weight).....	"	15.44	"
Decagramme, 10 grammes.....	" ...	154.4	"
Hectogramme, 100 grammes.....	" ..	1544.0	" { 3.2167 oz. Troy / 3.5291 oz. Avd'ps.
Kilogramme, 1,000 grammes.....	"	32⅛ oz. Troy or 2.2057 lbs. Avd'ps.	
Myriagramme, 10,000 grammes.....	"	321⅜ " "	22.057 " "

*Some authorities give the gramme as 15.43402344 grains, at which rate the kilogramme would be 32.154 oz. Troy.

ASSAY WEIGHTS.

1000=10 Grains.		1000=1 Gramme.	
10 grains.....	=1000	1 gramme.....	=1000
5 "	=.500	.5 "	=.500
3 "	=.300	.3 "	=.300
2 "	=.200	.2 "	=.200
1 "	=.100	.1 "	=.100
0.5 "	=.050	.05 "	=.050
0.3 "	=.030	.03 "	=.030
0.2 "	=.020	.02 "	=.020
0.1 "	=.010	.01 "	=.010
0.05 "	=.005	.005 "	=.005
0.03 "	=.003	.003 "	=.003
0.02 "	=.002	.002 "	=.002
0.01 "	=.001	.001 "	=

ASSAY TABLE

Showing the amount of Gold and Silver, in ounces and fractions, contained in one ton of ore, of two thousand pounds, from the weight of fine metal obtained in an assay of (half an ounce) or two hundred and forty grains of ore.

Prepared for JUSTINIAN CAIRE.

If 240 grains of Ore give of Fine Metal—Thousands of the unit of 10 grains.	One ton of Ore will yield of Fine Metal—Ounces.	Intrinsic Value per ton—Silver.....	Intrinsic Value per ton—Gold.....	If 240 grains of Ore give of Fine Metal—Thousands of the unit of 10 grains.	One ton of Ore will yield of Fine Metal—Ounces.	Intrinsic Value per ton—Silver.....	Intrinsic Value per ton—Gold.....
				.030	36.46	$47.14	$ 753.69
.001	1.21	$ 1.56	$ 25.01	1	37.67	48.70	778.71
2	2.43	3.14	50.23	2	38.89	50.28	803.93
3	3.64	4.71	75.24	3	40.10	51.85	828.94
4	4.86	6.28	100.46	4	41.32	53.42	854.16
5	6.08	7.86	125.68	5	42.53	54.99	879.17
6	7.29	9.42	150 70	6	43.75	56.56	904.39
7	8.51	10.99	175.92	7	44.96	58.13	929.40
8	9.72	12.57	200.93	8	46.18	59.71	954 62
9	10.94	14.14	226.15	9	47.39	61.27	979.64
.010	12.15	15.69	251.16	.040	48.61	62.85	1004.86
1	13.37	17.29	276.38	1	49.83	64.43	1030.07
2	14.58	18.85	301.29	2	51.04	65.99	1055.09
3	15.80	20.43	326.61	3	52.26	67.57	1080.31
4	17.01	21.99	351.63	4	53.47	69.13	1105.32
5	18.23	23.57	376.85	5	54.69	70.71	1130.54
6	19.44	25.13	401.86	6	55.90	72.27	1155.55
7	20.66	26.71	427.08	7	57.12	73 85	1180.77
8	21.87	28.27	452.09	8	58.33	75.42	1205.79
9	23.09	29.85	477.31	9	59.55	76.99	1231.00
.020	24.30	31.42	502.32	.050	60.76	78.56	1256.02
1	25.51	32.99	527.54	1	61.98	80.13	1281.24
2	26.74	34.57	552.76	2	63 19	81.70	1306.25
3	27.95	36.14	577.78	3	64.41	83.28	1331.47
4	29.17	37.71	603.00	4	65.62	84.84	1356.48
5	30.38	39.28	628.01	5	66.84	86.42	1381.70
6	31.60	40.86	653.23	6	68.05	87.98	1406.72
7	32.81	42.42	678.24	7	69.27	89.56	1431.93
8	34.03	44.00	703.46	8	70.48	91.12	1456.95
9	35.24	45.56	728 47	9	71.70	92.70	1482.17

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

ASSAY TABLE

[CONTINUED]

Showing the amount of Gold and Silver, in ounces and fractions, contained in one ton of ore, of two thousand pounds, from the weight of fine metal obtained in an assay of (half an ounce) or two hundred and forty grains of ore.

Prepared for JUSTINIAN CAIRE.

If 240 grains of Ore give of Fine Metal—Thousands of the unit of 10 grains.	One ton of Ore will yield of Fine Metal—Ounces.	Intrinsic Value per ton—Silver.....	Intrinsic Value per ton—Gold.....	If 240 grains of Ore give of Fine Metal—Thousands of the unit of 10 grains.	One ton of Ore will yield of Fine Metal—Ounces.	Intrinsic Value per ton—Silver.....	Intrinsic Value per ton—Gold.....
.060	72.92	$94.28	$1,507.39	.085	103.30	$133.56	$2,135.40
1	74.13	95.84	1,532.40	6	104.51	135.12	2,160.41
2	75.35	97.42	1,557.62	7	105.73	136.70	2,185.63
3	76.56	98.99	1,582.63	8	106.94	138.26	2,210.64
4	77.78	100.56	1,607.85	9	108.16	139.84	2,235.86
5	78.99	102.13	1,632.86	.090	109.37	141.41	2,260.87
6	80.21	103.70	1,658.08	1	110.59	142.98	2,286.09
7	81.42	105.27	1,683.10	2	111.80	144.55	2,311.11
8	82.64	106.85	1,708.32	3	113.02	146.13	2,336.33
9	83.85	108.41	1,733.33	4	114.23	147.69	2,361.34
.070	85.07	109.99	1,758.55	5	115.45	149.27	2,386.56
1	86.28	111.55	1,783.56	6	116.67	150.84	2,411.78
2	87.50	113.13	1,808.78	7	117.88	152.41	2,436.79
3	88.71	114.69	1,833.79	8	119.10	153.99	2,462.01
4	89.93	116.27	1,859.01	9	120.31	155.55	2,487.02
5	91.14	117.84	1,884.03	.100	121.53	157.13	2,512.24
6	82.36	119.41	1,909.25	.200	243.05	314.26	5,024.48
7	93.58	120.99	1,934.47	.300	364.58	471.39	7,536.72
8	94.79	122.56	1,959.48	.400	486.11	628.52	10,048.96
9	96.01	124.13	1,984.70	.500	607.64	785.65	12,561.21
.080	97.22	125.70	2,009.71	.600	729.16	942.78	15,073.45
1	98.44	127.27	2,034.93	.700	850.69	1,099.91	17,585.70
2	99.65	128.84	2,059.94	.800	972.22	1,257.04	20,097.93
3	100.87	130.42	2,085,16	.900	1,093·75	1,414.17	22,610.17
4	102.08	131.98	2,110.18	1000	1,215.27	1,571.30	25,122.41

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

ASSAY TABLE

Showing the amount of Gold and Silver, in ounces and fractions, contained in one ton of ore, of two thousand pounds, from the weight of fine metal obtained in an assay of 20 Grammes of ore.

Prepared for JUSTINIAN CAIRE.

If 20 grammes of Ore give of Fine Metal—Thousands of the unit of 1 gramme.	One ton of Ore will yield of Fine Metal—Ounces.	Intrinsic Value per ton—Silver.....	Intrinsic Value per ton—Gold.....	If 2 grammes of Ore give of Fine Metal—Thousands of the unit of 1 gramme.	One ton of Ore will yield of Fine Metal—Ounces.	Intrinsic Value per ton—Silver.....	Intrinsic Value per ton—Gold.....
.001	1.458	1.88.5	30.14.6	.034	49.583	64.10.4	1024.97.4
.002	2.916	3.77.1	60.29.2	.035	51.041	65.99.0	1055.12.0
.003	4.374	5.65.7	90.43.8	.036	52.499	67.87.5	1085.26.7
.004	5.833	7.54.2	120.58.5	.037	53.958	69.76.0	1115.41 3
.005	7.291	9.42.8	150.73.1	.038	55.416	71.64.6	1145.55 9
.006	8.749	11.31.3	180.87.7	.039	56.874	73.53.1	1175.70.5
.007	10.208	13.19.8	211.02.4	.040	58.333	75.41.9	1205.85 2
.008	11.666	15.08.4	241.17.0	.041	59.791	77.30.4	1235.99.8
.009	13.124	16.95.9	271.31.6	.042	61.249	79.18.9	1266.11.4
.010	14.583	18.85.4	301.46.3	.043	62.708	81.07.5	1296.29.1
.011	16.041	20.73.9	331.60 9	.044	64.166	82.96.0	1326.43.7
.012	17.499	22.62.5	361.75.5	.045	65.624	84.84.6	1356.58.3
.013	18 958	24.51.0	391 90.1	.046	67.083	86.73.1	1386.73.0
.014	20:416	26.39.5	422.04.8	.047	68.541	88.61.7	1416.87.6
.015	21.874	28.28.1	452.19.4	.048	69.999	90.50.2	1447.02.2
.016	23.333	30.16.6	482.34.0	.049	71.458	92 38.7	1477.16.8
.017	24.791	32.05.2	512.48.7	.050	72.916	94.27.3	1507.31.5
.018	26.249	33.93.7	542.63.3	.051	74.374	96.15.9	1537.46.1
.019	27.708	35.82.4	572.77.9	.052	75.833	98.04.4	1567 60.7
.020	29.166	37.70.8	602.92.6	.053	77.291	99.93.0	1597.75.4
.021	30.624	39.59.4	633.07.2	.054	78.749	101.81.5	1627.90.0
.022	32.083	41.47.9	663.21.8	.055	80.208	103.70.1	1658.04.6
.023	33.541	43.36.4	693.36.5	.056	81.666	105.58 6	1688.19.3
.024	34.999	45.25.0	723.51.1	.057	83.124	107.47.1	1718.33.9
.025	36.458	47.13.5	753.65.7	.058	84.583	109.35.7	1748.48.5
.026	37.916	49.02.1	783.80.3	.059	86.041	111.24.2	1778.63.2
.027	39.374	50.90.6	813.95.0	.060	87.499	113.12.8	1808.77.8
.028	40.833	52.79.2	844.09.6	.061	88.958	115 01.3	1838.92.4
.029	42.291	54.67.7	874.24.2	.062	90.416	116.89.9	1869.07.0
.030	43.749	56.56.2	904.38.9	.063	91.874	118.78.4	1899.21.7
.031	45.208	58.44.8	934.53.5	.064	93.333	120.67.0	1929.36.3
.032	46.666	60.33.3	964.68.1	.065	94.791	122.55.5	1959.50.9
.033	48.124	62.21.9	994.82.8				

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

ASSAY TABLE

[CONTINUED]

Showing the amount of Gold and Silver, in ounces and fractions, contained in one ton of ore, of two thousand pounds, from the weight of fine metal obtained in an assay of 20 Grammes of ore.

Prepared for JUSTINIAN CAIRE.

If 20 grammes of Ore give of Fine Metal—Thousands of the unit of 1 gramme.	One ton of Ore will yield of Fine Metal—Ounces.	Intrinsic Value per ton—Silver.....	Intrinsic Value per ton—Gold.....	If 20 grammes of Ore give of Fine Metal—Thousands of the unit of 1 gramme.	One ton of Ore will yield of Fine Metal—Ounces.	Intrinsic Value per ton—Silver.....	Intrinsic Value per ton—Gold.....
.066	96.249	124.44.0	1989.65.6	.098	142.916	184.77.5	2954.33.7
.067	97.708	126.32.6	2019.80.2	.099	144.374	186.66.1	2984.48.4
.068	99.166	128.21.1	2049.94.8	.100	145.833	188.54.7	3014.63.0
.069	100.644	130.09.7	2080.09.5	.200	291.666	377.09	6029.26
.070	102.083	131.98.3	2110.24.1	.300	437.499	565.64	9043.91
.071	103.541	133.86.8	2140.38.7	.400	583.333	754.19	12058.55
.072	104.999	135.75.4	2170.53.4	.500	729.166	942.73	15073.18
.073	106.458	137.63.4	2200.68.0	.600	874.999	1131.29	18087.82
.074	107.916	139.52.4	2230.82.6	.700	1020.833	1319.83	21102.46
.075	109.374	141.41.0	2260.97.2	.800	1166.666	1508.38	24117.09
.076	110.833	143.29.5	2291.11 9	.900	1312.499	1696.93	27131.73
.077	112.291	145.18.1	2321.26.5	1000			
.078	113 749	147.06.6	2351.41.1	Or 1 Gramme	1458.333	1885.47	30146.37
.079	115.208	148.95.2	2381.55.8	2 "	2916.666	3770.95	60292.74
.080	116.666	150.83.7	2411.70.4	3 "	4374.999	5656.42	90439.10
.081	118.124	152.72.2	2441.85.0	4 "	5833.333	7541.90	120585.47
.082	119.583	154.60.7	2471.99.7	5 "	7291.666	9427.37	150731.84
.083	121.041	156.49.4	2502.14.3	6 "	8749.999	11312.85	180878.21
.084	122.499	158.37.9	2532.28.9	7 "	10208.333	13198.32	211024.58
.085	123.957	160.26.5	2562.43.6	8 "	11666.666	15083.80	241170.94
.086	125.416	162.15.0	2592.58.2	9 "	13124.999	16964.27	271317.31
.087	126.874	164.03.5	2622.72.8	10 "	14583.333	18854.75	301463.68
.088	128.332	165.92.5	2652.87.4	11 "	16041.666	20740.22	331610.05
.089	129.791	167.80.6	2683.02.1	12 "	17499.999	22625.70	361756.42
.090	131.249	169.69.2	2713.16.7	13 "	18958.333	24511.17	391902.78
.091	132.708	171.57.7	2743.31.3	14 "	20416.666	26396.65	422049.15
.092	134.166	173.46.3	2773.46.0	15 "	21874.999	28282.12	452195.52
.093	135.624	175.34.8	2803.60.6	16 "	23333.333	30167.60	482341.89
.094	137.083	177.23.3	2833.75.2	17 "	24791.666	32053.07	512488.25
.095	138.541	179.11.9	2863.89.9	18 "	26249.999	33938.55	542634.62
.096	139.999	181.00.4	2894.04.5	19 "	27708.333	35824.02	572780.99
.097	141.458	182.89.0	2924.19.1	20 "	29166.666	37709.50	602927.36

IMPORTER AND DEALER IN ASSAYERS' MATERIALS.

530 & 532 Washington Street, San Francisco.

The foregoing table is computed from an assay of 20 grammes, which is a convenient amount for a crucible assay. When a scorification assay is made, two scorifiers are used, with 10 grammes in each, and the two buttons (which should weigh exactly alike if the assay is correct) are weighed together and treated as one assay. It is then only necessary to compare the tables with the number of Milligrammes obtained, in the first column; in the next will be found the number of ounces to the ton, and the value of gold and silver in the other columns. A single example will fully illustrate it.

20 grammes of ore yield a metallic button of gold and silver weighing 830 Milligrammes.

Boiled in Nitric Acid.—Gold weighing 32 Milligrammes remains.

380—32 Gold=348 Silver.

In the first column find 32 Milligrammes and you have 46.666 ozs. Troy and its value in gold column, $964.68.

In the first column find 348 Milligrammes. To do this you must add 48 and 300, and you have 69.999 + 437.499=507.49 ozs. Troy, and its value in silver column 90.50 + 565.54=$656.14.

The result will be,

Gold	46.666	ozs.	Troy.....	=$964.68.
Silver	507.49	"	"	= 656.14.
Value per ton of 2,000 lbs				$1,620.82.

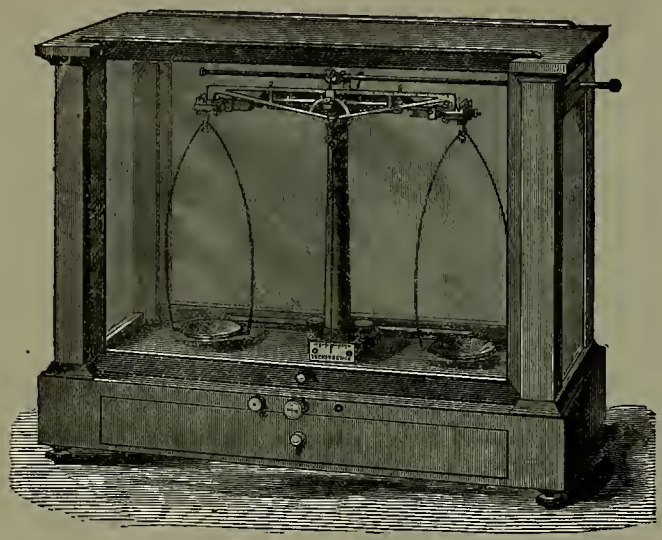
Removed to
521 & 523 Market Street,

SOLE AGENCY

—OF—

BECKER & SONS,

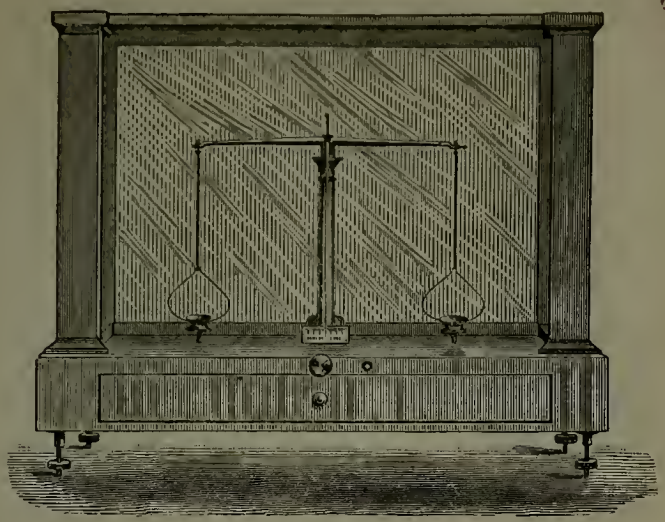
Assay & Bullion Balances



Analytical Balance No. 7.

Every Balance and set of Weights leaving this establishment is guaranteed to be accurately adjusted as represented in this list.

Removed to
521 & 523 Market Street



BALANCE No. 3.

BALANCES

FOR ASSAYING, ANALYTICAL AND SCIENTIFIC USES.

No. 1. Assay Balance in French polished glass case, sliding frame counterpoised Can be charged up to twenty-five grammes in each pan. Deviation of needle on scale, 5 divisions for one milligramme. Steel knives with agate bearings, ...

No. 2. In French polished glass case, 9 inches long, 9¾ inches high, and 3 inches deep, sliding frame counterpoised, packed in a light box, with strap for carrying, weighing, all boxed, 4½ lbs. Needle deviates 20 divisions on the scale for 1 milligramme. With set of weights, 1 platinum gramme to 1-10 milligramme, ...

No. 3. Assay Balance in French polished glass case, with counterpoised sliding frame. When loaded up to 1 gramme in each pan needle deviates 10 divisions on the scale for 1 milligramme ; 1-100 part of a milligramme is therefore to be seen. Steel knives with agate bearings, ...

No. 4. Ditto, for up to 10 grammes in each pan, ...

No. 5. Assay Balance, improved construction, for a charge of 10 grammes in each pan, with apparatus for rider, sensible to 1-100 milligramme with its full charge,

No. 6. Analytical Balance, for a charge up to 100 grammes in each pan, in French polished glass case, front sliding frame counterpoised, all bearings steel, sensible to ½ milligramme with its full charge, with arrest for pans, ...

No. 7. Analytical Balance, for a charge up to 100 grammes in each pan, in fine French polished glass case, front sliding frame, counterpoised. All bearings agate planes, with new improved arrangements for arrest of pans and beam, sensible to 1-20 milligramme with its full charge. Provided with apparatus for specific gravity. Rider and weighing tubes. Beam divided in 1-10 parts of milligrammes. Pans 2⅜ inches in diameter, ...

Ditto, ditto, with agate knife edges, ...

No. 8. Same, for 200 grammes in each pan, sensible to 1-20 milligramme with its full charge. Provided with arrest for pans, apparatus for specific gravity. Rider and weighing tubes. Beam divided into 1-10 parts of milligrammes. Pans 3 inches in diameter, ...

No. 9. Ditto, with adjustable shelf for supporting beaker with water when taking specific gravities, ...

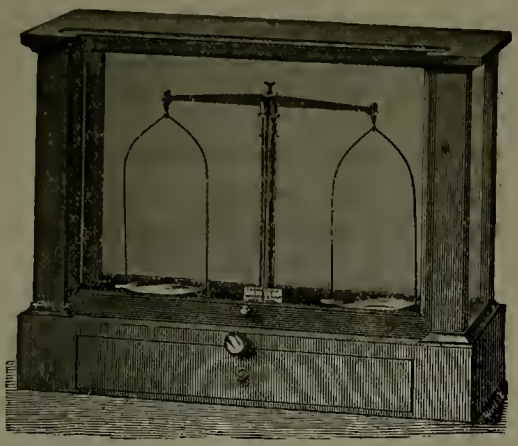
Nos. 8 and 9 with agate knife edges, ...

No. 10. Balance for scientific use. For a charge up to 500 grammes in each pan sensible to 1-10 part of a milligramme with its full charge. Glass case as those before. All bearings agate planes. Provided with arrest for pans and beam, apparatus for taking specific gravity. Rider and weighing tubes. Beam divided into 1-10 parts of milligrammes. Pans 4 inches in diameter, ...

No. 11. Ditto, with adjustable shelf for supporting beaker with water when taking specific gravities, ...

No. 12. Same, for a charge up to 1,000 grammes in each pan sensible to 1-10 milligramme with its full charge. Provided with arrest for pans, adjustable shelf for specific gravity, rider, etc. Beam divided into 1-10 milligrammes. Pans 5 inches in diameter, ...

No. 13. Balance for specific use, in glass case for a charge up to 10 kilos in each pan, sensible to 1 milligramme with that charge. Pans 9 inches in diameter, ...



BALANCE No. 16.

BALANCES.

FOR PHARMACEUTICAL, SPECIFIC GRAVITY, GOLD AND OTHER PURPOSES WHERE ACCURACY IS REQUIRED.

No. 14. Prescription Scale, on French polished box with drawer, drop lever, bows and movable pans. Can be charged up to 2 ounces in each pan. Sensible to 1-50 grain,.....

No. 15. Ditto, ditto, for marine purposes, ...

No. 16. Prescription Balance, in French polished glass case, with counterpoise front sliding frame, ...

No. 17 Prescription Scales, 5 ounces in each pan, on French polished box with drawer, provided with drop lever, bows and movable pans. Sensible to 1-30 grain,

No. 18. Ditto, ditto, in glass case, ...

No. 19. Balance for 10 ounces in each pan on French polished box with drawer, provided with drop lever, bows, movable pans, set screws and level. Sensible to 1-20 grain,.....

No. 20. Ditto, ditto, in glass case, with sliding frame. Sensible to 1-30 grain, ...

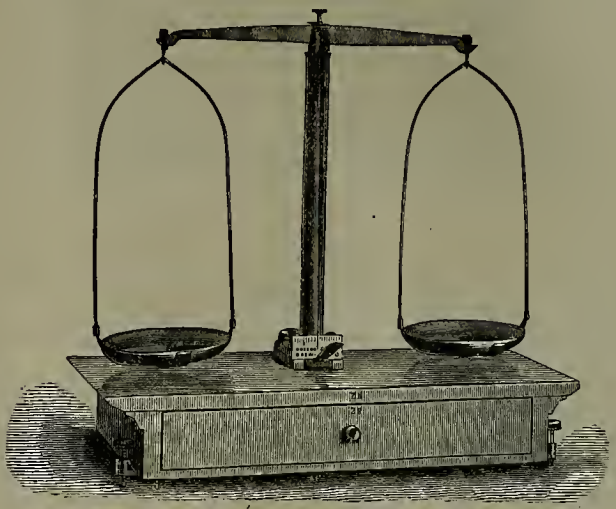
No. 21. Balance for 20 ounces in each pan, on French polished box with drawer, provided with eccentric for lifting, bows, movable pans, set screws and level. Sensible to 1-10 grain,.....

No. 22. Ditto, ditto, in glass case, with counterpoised sliding frame. Sensible to 1-20 grain with that charge,.....

No. 23. Ditto, ditto, for 50 ounces in each pan. Sensible to ½ grain with that charge,

No. 24. Same, in glass case. Sensible to ½ grain,.....

No. 25. Ditto, ditto, for 100 ounces in each pan. Sensible to ½ grain with that charge.



BALANCE No. 19.

No. 26. Same, in glass case. Sensible to ½ grain,.....

No. 27. Ditto, ditto, for 300 ounces in each pan. Sensible to 1 grain with that charge,

No. 28. Same, in glass case,.....

No. 29. Bullion and Specie Scale, carrying 500 ounces in each pan. Sensible to 1 grain, with that charge. All bearings planes, with new improved construction for the arrestation of the beam. Provided with arrest for pans, set screws and level.....

No. 30. Ditto, ditto, in glass case. Sensible to ½ grain,.....



Removed to
521 & 523 Market Street.

No. 31. Ditto, ditto, for 2,000 ounces in each pan. Sensible to 2 grains with that charge,.....

No. 32. Same in glass case. Sensible to 1 grain, ...

No. 33. Ditto, ditto, for 3,500 ounces in each pan. Sensible to 2 grains with that charge,.....

No. 34. Same, in mahogany glass case French polished with counterpoised front sliding frame. Sensible to 1 grain with that charge,.....

No. 35 Becker's Improved Druggists' Box Scale, for a charge up to 8 lbs. in each pan. Sensible to 1 grain with its full charge. Pans nickel plated, 8 inches in diameter, ...

Ditto, ditto, with arrest for pans,.....

Ditto, ditto, in marble boxes, ...

No. 36. Diamond Scale, in glass case sliding frame counterpoised for a charge up to 100 carats in each pan. Sensible to 1–1000 carat with that charge. Provided with arrest for pans and set of weights 100 carat piece and down to 1-64 carat.

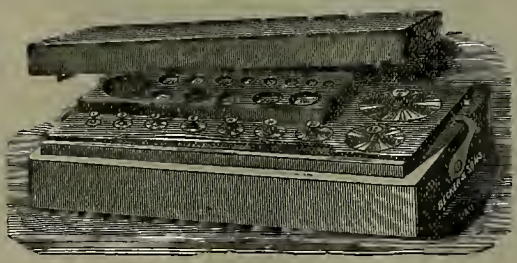


BALANCE No. 37.

No. 37. Becker & Sons' New Improved Prescription Balance can be charged up to 3 ounces in each pan. Sensible to 1-30 grain. Box 13½ inches long by 5½ inches wide. Marble top with glass cover,.....

Ditto, ditto, with drawer for weights,.....

Ditto, ditto, with 2 drawers,.....



WEIGHTS No. 5.

WEIGHTS.

IN FRENCH POLISHED BOXES LINED WITH VELVET, EVERY PIECE FITTED SEPARATELY; BRASS WEIGHTS LACKERED; THE FRACTION OF THE GRAMME ARE PLATINUM; EXCEPT BELOW 20 MILLIGRAMMES, WHICH ARE MADE OF ALUMINUM.

Adjusted to the utmost Accuracy.

No. 1. Platinum gramme and down to 1-10 milligramme,.....

No. 2. Ten gramme piece and down to 1-10 milligramme,.....

No. 3. Two twenty gramme pieces and down to 1 milligramme. 3 riders,.....

No. 4. Fifty gramme piece and down to 1 milligramme. 3 riders,.....

No. 5. Hundred gramme piece and down to 1 milligramme. 3 riders,.....

No. 6. Two hundred gramme piece and down to 1 milligramme. 3 riders,.....

No. 7. Five hundred gramme piece and down to 1 milligramme. 3 riders,.....

No. 8. Five kilo piece and down to 1 milligramme,.....

No. 9. Ten grain piece and down to 1-1000 grain,.....

No. 10. One thousand grain piece and down to 1-100 grain. 3 rideas,.....

Gramme and Grain Weights, No. 2.

No. 11. Fifty gramme piece and down to 1 milligramme,.....

No. 12. Hundred gramme piece and down to 1 centigramme,.....

No. 13. Hundred gramme piece and down to 1 milligramme,.....

No. 14. Five hundred gramme piece and down to 1 gramme, in mahogany block,.....

No. 15. Five hundred gramme piece and down to 1 centigramme, in mahogany case,...

No. 16. One kilo and down to 1 gramme, in mahogany block,.....

No. 17. One kilo and down to 1 centigramme, in mahogany case, ...



WEIGHTS No. 18.

Removed to
521 & 523 Market Street,

No. 18. One thousand grain piece and down to 1-100 grain,.....

No. 19. Sets of Assay Ton Weights of 4 A. T. down to 1-20 A. T.....

(The assay ton weights have been introduced by Dr. C. F. Chandler, of the School of Mines, Columbia College, New York, where they are now in use for convenience in the assay of ores. The weight denominated by Dr. Chandler "One A. T." equals 29,1666 grammes, and contains consequently as many milligrammes as there are troy ounces in a ton avoirdupois of 2,000 lbs. Therefore, if one A. T. of ore assays 1 milligramme, the ton contains 1 ounce troy)

Apothecary Weights.

IN MAHOGANY BOXES LINED WITH VELVET.

No. 20. One troy ounce down to ¼ grain,.....

No. 21 Twenty grammes and down to 1 centigramme, ...

No. 22. One thousand grains down to 1-10 grain,.....

No. 23. Two pounds and down to 1-8 oz. avoirdupois, in mahogany block,.....

No. 24. Four pounds and down to 1-8 oz. avoirdupois, in mahogany block

Brass Troy Ounce Weights, Lackered.

IN MAHOGANY BOXES LINED WITH VELVET.

No. 25. One ounce and down to 1-4 grain, ...

No. 26. Two two ounce pieces and down to 1-2 grain,.....

No. 27. Five ounce piece and down to 1-4 grain, ...

No. 28. Ten ounce piece and down to 1-2 grain, ...

No. 29. One twenty ounce piece and down to 1-2 grain,.....

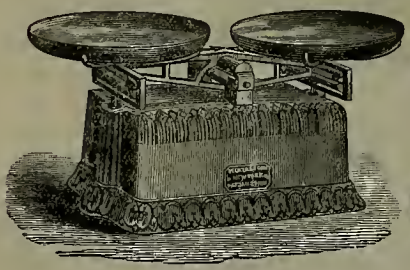
No. 30. One fifty ounce piece and down to 1-2 grain,.....

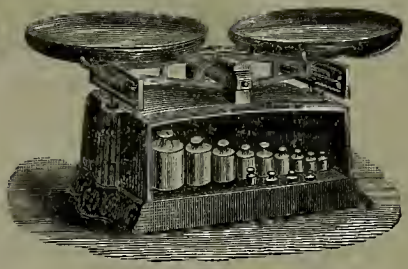
No. 31. Two one hundred ounce pieces and down to 1 grain,.....

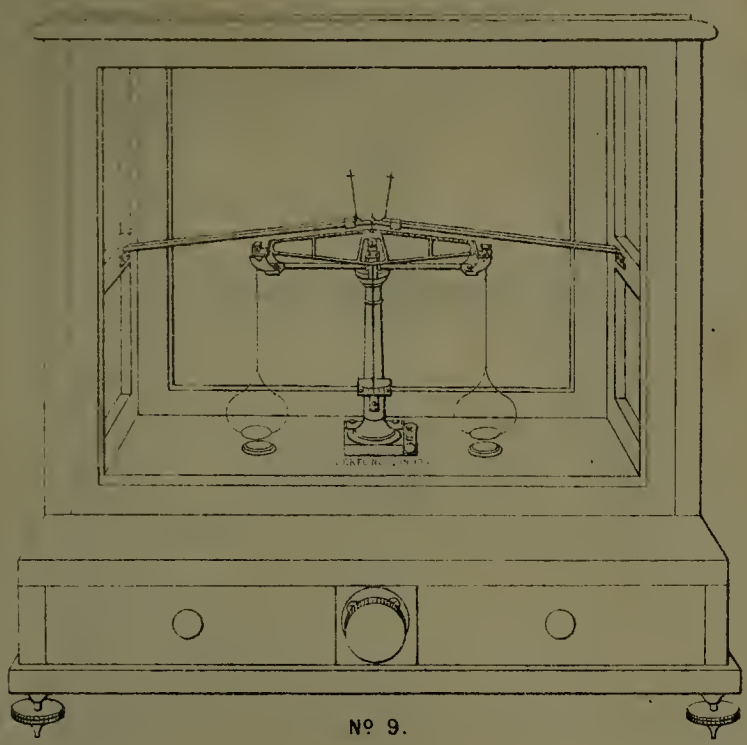
No. 32. Two hundred ounce piece and down to 1 grain,.....

No. 33. Two five hundred ounce pieces,.....

All the weights in this list are adjusted according to the French Standard and the Ounce Troy, 31,1033 Grammes.



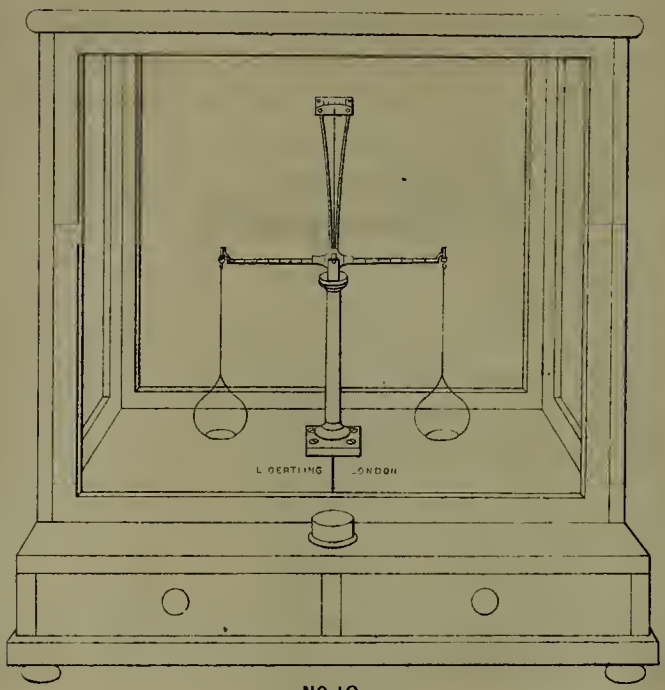




Nº 9.

ASSAY BALANCE with 8-inch beam, to carry 200 grains in each pan, turning most distinctly with $\frac{1}{10\,0\,0}$ of a grain; the beam is constructed with three edges of agate, and the pans are supported by agate planes; apparatus for moving the sliding weight . . .

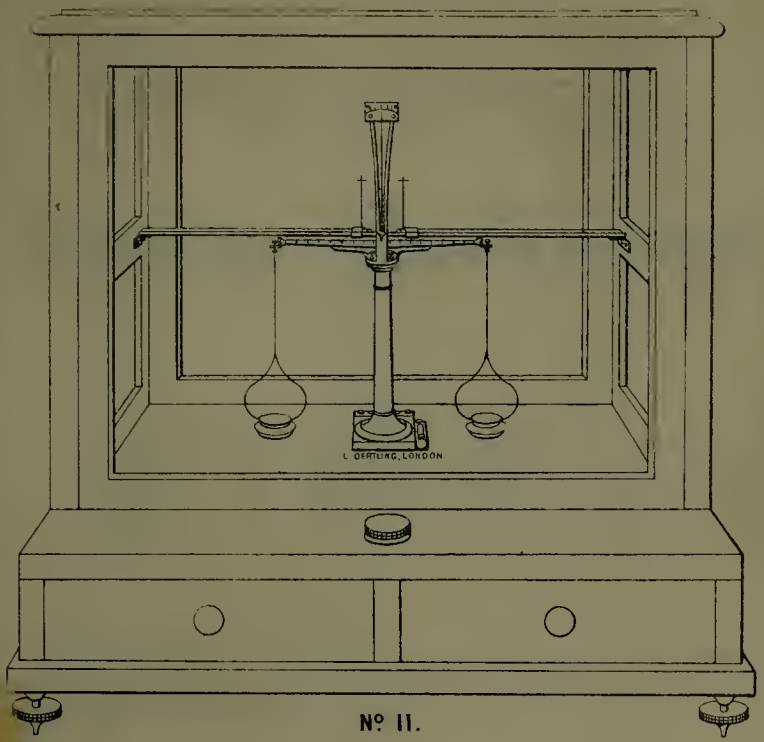
SOLD BY JUSTINIAN CAIRE.



Nº 10.

ASSAY BALANCE with 8-inch beam, to carry 50 grains in each pan, and turn with $\frac{1}{100}$ of a grain

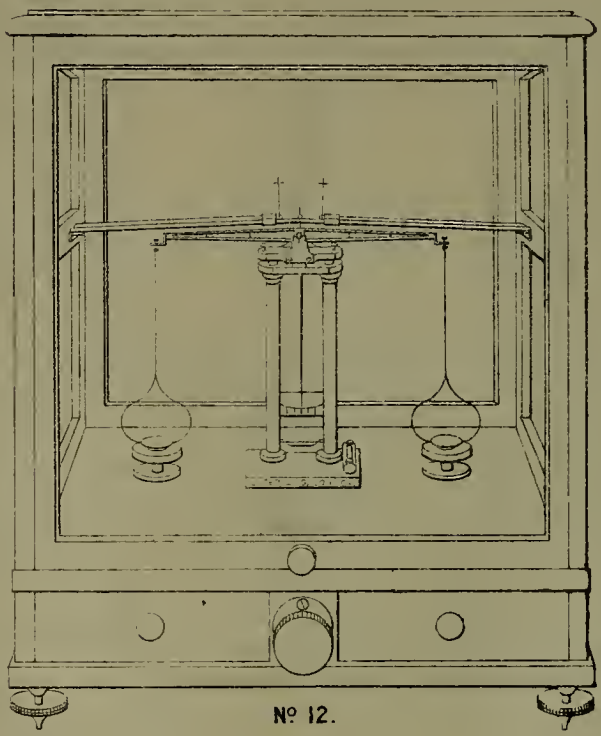
SOLD BY JUSTINIAN CAIRE.



No. 11.

ASSAY BALANCE with 8-inch beam, to carry 30 grains in each pan, and turn with $\frac{1}{10000}$ of a grain; the beam is divided, and apparatus fixed for moving the sliding weight

SOLD BY JUSTINIAN CAIRE.



Nº 12.

ASSAY BALANCE with a beam 10 inches long, of an improved construction, on a stand with double columns; to carry 30 grains in each pan, and turn with $\frac{1}{1000}$ of a grain; the beam is divided, and apparatus fixed for moving sliding weights; plate glass for the bottom of the case

SOLD BY JUSTINIAN CAIRE.

AGENCY

FOR

L. OERTLING,

Assay Balances.

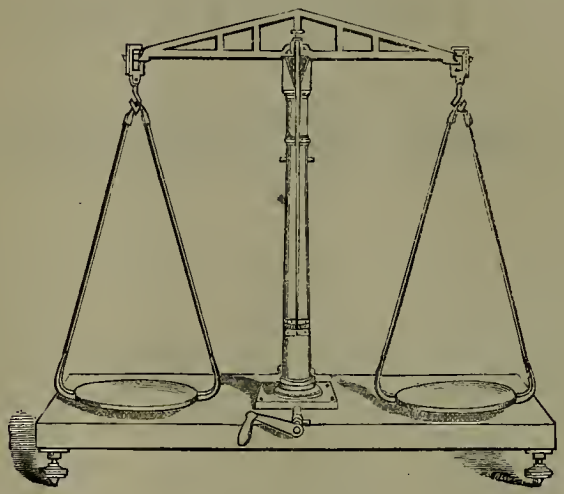
No. 9. Balance with 8-inch beam, to carry 200 grains in each pan, turning most distinctly with $\frac{1}{1000}$ of a grain; the beam is constructed with three edges of agate, and the pans are supported by agate planes; apparatus for moving the sliding weight.....

No. 10. Balance with 8-inch beam, to carry 50 grains in each pan, and turn with $\frac{1}{200}$ of a grain.....

No. 11. Balance with 8-inch beam, to carry 30 grains in each pan, and turn with $\frac{1}{1000}$ of a grain; the beam is divided, and apparatus fixed for moving the sliding weight.....

No. 12. Balance with a beam 10-inches long, on a stand with double columns; to carry 30 grains in each pan, and turn with $\frac{1}{1000}$ of a grain; the beam is divided; and apparatus fixed for moving sliding weights; plate glass for the bottom of the case.....

HENRY TROEMNER'S
STANDARD SCALES & WEIGHTS,
PHILADELPHIA.



BULLION BALANCES,

Several patterns, brass or iron beams,

With weights 1500 to 2,000 ounces Troy.

EXTRA BULLION WEIGHTS IN MAHOGANY BLOCKS,

50 ounces down.

Assay Outfit for $100.

To meet the demand for cheap and complete Outfit for Assayers and Prospectors, and to answer the frequent inquiries, especially from those in a remote part of the Coast, as to the amount and kind of apparatus and Chemicals necessary to fit up a small establishment, we have prepared the following list, and are always ready to furnish the goods, and for the sum of $100.

1 Assay Balance, with weights from 10 to 1-100 grains. Gramme sets will be supplied if desired in place of grains.
1 Pulp Scale, with weights from one oz. Troy to one grain.
1 10-inch Furnace, Iron, lined with fire-brick.
1 Muffle.
1 pair Crucible Tongs.
1 pair Scorifier Tongs.
1 pair Cupel Tongs.
1 Cupel Mould.
1 Assay Mould.
1 Quadruple Ingot Mould
2 doz. Assay Crucibles.
2 dozen Scorifiers.
1 quarter-dozen Crucible Covers.
1 Brass Blow-Pipe.
1 one-half Gallon Iron Mortar and Pestle.
1 Cold Chisel.
One-half dozen Annealing Cups.
1 Nest (6) Porcelain Evaporating Dishes.
1 dozen Test Tubes.
1 Rack for Test Tubes.
1 dozen Mattresses, assorted.
1 Glass Spirit Lamp and Wicking.
1 Nest (4) Beakers.
1 Wash Bottle.
1 4-inch Glass Funnel.
1 Brass Sieve, No. 60.
One-half dozen assorted Test Papers.
1 Package Filters.
1 4-inch Steel Spatula.
1 Wire Tripod.
1 Steel Hammer.
1 Polished Anvil.
1 pair Flat Pliers.
1 pound Chemical Pure Nitric Acid.
5 pounds Litharge.
1 pound Chemical Pure Sulphuric Acid.
1 pound Chemical Pure Muriatic Acid.
10 pounds Bi-Carbonate Soda.
10 pounds Bone Ash.
5 pounds Borax.
2 pounds Refined Nitre.
1 pound Carbonate Potassa.
1 pound Fused Cyanide Potassa,
1 pound Sulphuret of Iron.
5 pounds Bar Lead, pure
1 pound FFF Ammonia.
1 pound Black Flux.
One-half ounce Proof Silver.
1 pound Pure Granulated Lead.
1 pound Pure Rolled Lead.
1 pound Argols

This outfit, we are confident, would enable many a miner and prospector, with a little experience, to do much of his own Assaying, especially in such remote places as make it difficult to have it done by competent parties, except by waiting for some time.

JUSTINIAN CAIRE.

Nos. 530 & 532 Washington Street,
and 528 Broadway,

SAN FRANCISCO.

CALIFORNIA
STATE LIBRARY

Call No. Calif **
TN
575
J81
1881

JUSTINIAN CAIRE,

IMPORTER OF

ASSAYERS' MATERIALS & CHEMICALS

HARDWARE AND FANCY GOODS.

Brass Wire Screen.

Marine & Opera Glasses.

530 & 532 Washington Street.

SAN FRANCISCO.

Removed to 414 Market Street,

Parties entrusting orders with us can rely upon good selections and prompt attention. All goods will be packed by experienced hands for interior transportation.